Curriculum Vitae

Nuno Manuel Garcia dos Santos

June 2023

"Education is not something you can finish." – Isaac Asimov

“Science is the belief in the ignorance of experts.” – Richard Feynman

FECIT MIHI MAGNA QUI POTENS EST

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Abbreviations and acronyms

A3ES	*Agência de Avaliação e Acreditação do Ensino Superior*
AAL	Ambient Assisted Living
AAPELE	Architectures, Algorithms and Platforms for Enhanced Living Environments
AdmS	*Administração de Sistemas*
AFTEBI	*Associação para a Formação Tecnológica e Profissional da Beira Interior*
ALLab	Assisted Living, Computing and Telecommunications Laboratory
AS	*Análise de Sistemas*
ASI	*Análise de Sistemas de Informação*
AVA	*Ambientes de Vida Assistidos*
BDE	*Bolsa de Doutoramento em Empresa*
BE	Biomedical Engineering
BI	*Bolsa de Investigação*
BIC	*Bolsa de Iniciação Científica*
BioEng	*Licenciatura em Bioengenharia*
BSAFE-Lab	Law enforcement, Justice and Public Safety Research and Technology Transfer Laboratory
BSc	Bachelor of Science
C4	Cloud Computing Competence Centre
CC	*Computação na* Cloud
CFIUTE	*Centro de Formação Interação UBI Tecido Empresarial*
CieBio	*Licenciatura em Ciências Biomédicas*
Comp. *& Prog.*	*Computadores e Programação*
COST	European Cooperation in Science and Technology
CU	Curricular Unit
D1	*1st decile, referring to a magazine / journal that has been ranked in the top 10% of the list of publications in its area*
DG	Directorate-General
ECATI	*Escola de Comunicação, Arquitetura,* Artes e Tecnologias da Informação
EI	*Licenciatura em Engenharia Informática*
EU	European Union
ER	*Engenharia de Redes*
ES	Country code for Spain
ESCM	*Escola Secundária Campos Melo*
ESFHP	*Escola Secundária Frei Heitor Pinto*
FCT	*Fundação para a Ciência e Tecnologia*
FCUL	Faculdade de Ciências da Universidade de Lisboa
FR	Country code for France
H Index	Hirsch Index
IBEB	Instituto de Biofísica e Engenharia Biomédica
InfMed	*Informática Médica*
IPCB	*Instituto Politécnico de Castelo Branco*
IPG	*Instituto Politécnico da Guarda*
IF	Impact Factor
IT	*Instituto de Telecomunicações*
IW	*Licenciatura em Informática Web*
MEI	*Mestrado em Engenharia Informática*
MO	Country code for Moldova
MSc	Master of Science
MT	Country code for Malta
NINF	*Núcleo de Informática da Universidade da Beira Interior*
PhD	Philosophy Doctor
PhD EI	*Doutoramento em Engenharia Informática*
PL	Country code for Poland
Progr	*Programação*
Proj	*Projecto*
PT	Country code for Portugal
Q1, Q2, Q3, Q4	*1st, 2nd, 3rd or 4th quartile, referring to a magazine / journal that has been ranked in that statistical quartile on its respective scientific area*
RAD	*Regulamento de Avaliação Docente*
RedTel	*Redes de Telecomunicações*
RSI	*Redes e Serviços Internet*
RO	Country code for Romania
SD	*Sistemas Distribuídos*
TCD	*Tecnologias de Cloud e Datacenter*
TI	*Tecnologias da Internet*
TIC4TELCO	*Tecnologias de Informação e Comunicação para o Sector das Telecomunicações*
TPB	*Tópicos de Processamento de Biosinais*
TRI	*Tecnologias de Redes Informáticas*
TSI	*Licenciatura em Tecnologias e Sistemas* de Informação
UBI	*Universidade Beira Interior*
UL	Universidade de Lisboa
ULHT	*Universidade Lusófona de Humanidades e Tecnologias*
UTAD	*Universidade de Trás-os-Montes e Alto Douro*
UK	Country code for United Kingdom

Preliminary note

This document is the *Curriculum Vitae* of Nuno Manuel Garcia dos Santos, reporting to the date shown in the front page.

This document is organized as follows. Chapter 1 makes an introduction of the candidate, and the following parts of the CV are organized as follows:

Chapter 2, Part A – Regarding teaching activities;

Part A- 1) describes teaching activities;

Part A- 2) describes the educational materials produced;

Part A- 3) presents the innovation actions regarding teaching;

Part A- 4) reports the supervisory of PhD, MSc and BSc students. It also includes the supervision of Post-docs in this disciplinary area;

Part A- 5) describes other activities such as professional experience in this area;

Chapter 3, Part B – Concerning research;

Part B- 1) Scientific publications are reported;

Part B- 2) Scientific and research projects are described here;

Part B- 3) Innovation, describing the patents the candidate has co-authored;

Part B- 4) Autonomy and leadership activities are described here;

Part B- 5) Awards received by the author are reported;

Chapter 4, Part C – Concerning other activities;

Part C- 1) Outreach activities are reported here;

Part C- 2) Describes the outcomes from R&D in very different degrees;

Part C- 3) Institutional positions held by the author are described here;

Part C- 4) Positions and roles of scientific or academic nature are described;

Part C- 5) Other positions held by the candidate;

Chapter 5, Conclusions, presents the conclusions, and the annexes contain additional information that complements the previous chapters / parts.

The Scientific Project (Part D) is submitted as a different document.

Expressions that are not English appear italicized, and when appropriate, its translation to English is provided. Abbreviations and acronyms are provided in page *viii*.

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1 Introduction

1.1 Identification

Name: Nuno Manuel Garcia dos Santos

Name used in publications: Nuno M. Garcia *or* Nuno Garcia.

Place and date of birth: Castelo Branco, Portugal, the 22nd November 1965.

Professional Address: *Faculdade de Ciências da Universidade de Lisboa, Departamento de Física*, Campo Grande, 1749-016 Lisbon, Portugal.

Contacts: telephone: +351-912-552-009

professional email addresses:

nmgarcia@ciencias.ulisboa.pt, nmgarcia@fc.ul.pt, ngarcia@it.ubi.pt

personal email address: *ngarcia@ngarcia.net*.

1.2 Academic degrees and titles

March 2021: **Habilitation** in Computer Science and Engineering by the University of Beira Interior (UBI), Covilhã, Portugal, approved by unanimity, with the seminar titled "The Internet Protocol, Past, some current limitations and a glimpse of a possible future". Members of the Jury: Mário Marque Freire (President, Vice-Rector, UBI), Fernando Pedro Lopes Boavida Fernandes (University of Coimbra), Rui Jorge Morais Tomaz Valadas (*Instituto Superior Técnico*, University of Lisboa), Luís Filipe Barbosa de Almeida Alexandre (UBI), Susana Isabel Barreto de Miranda Sargento (University of Aveiro) and Marília Pascoal Curado (University of Coimbra).

November 2008: **Doctor of Philosophy** in Computer Science and Engineering by UBI, with the thesis "Architectures and Algorithms for IPv4/IPv6-compliant Optical Burst Switching Networks," approved by unanimity. Supervisors: Mário Marques Freire (UBI) and Paulo Miguel Pereira Nepomucemo Monteiro (University of Aveiro and Head of Research at Nokia Siemens Networks Portugal). The PhD work was developed *in situ* at the Research and Development Unit of Siemens SA, Alfragide, Portugal (and in time Siemens Networks SA and Nokia Siemens Networks SA), funded by Siemens and the Portuguese Foundation for Science and Technology (FCT, *Fundação para a Ciência e Tecnologia*) through a PhD Studentship in Industry BDE (*Bolsa de Doutoramento em Empresa*).

July 2004: Degree (**5-year Bachelor of Science**, with *Honors*) in Mathematics and Computer Science, UBI.

1.3 Current professional occupation

Full Professor (tenure) of Biomedical Engineering at the Physics Department, Faculty of Sciences of the University of Lisbon, Lisbon.

As full professor at FCUL, he teaches undergraduate and graduate courses in the areas of Biomedical Engineering. He also supervises students at the undergraduate and graduate levels and supervises Post-Doctoral researchers. The position as Full Professor was obtained as result of an international call for applications (*Edital* N.º 1328/2022 published at *Diário da Républica, 2ª Série, N.º 172*, 6th September 2022).

Senior Researcher at the *Instituto de Biofísica e Engenharia Biomédica* (IBEB), FCUL, Lisbon, Portugal.

Since February 2023 he is a researcher at IBEB. In this context, he supervises and coordinates research in Biomedical Engineering, with a particular focus on Predictive Algorithms for Health and Well Being.

Senior Researcher at the *Instituto de Telecomunicações* (IT), UBI, Covilhã, Portugal.

IT has a delegation in Covilhã at UBI, as the university is one of its members. In this context, the Assisted Living Computing and Telecommunications Laboratory (ALLab) is a research team that is hosted within the Networks Architecture and Protocols research group of IT. He is a researcher of IT since January 2008. The appointment as Senior Researcher was awarded in October 2022 by the Management Board of IT after a nation-wide vote from all IT researchers.

Researcher of ALLab, Assisted Living, Computing and Telecommunications Laboratory, IT and UBI.

ALLab (https://allab.di.ubi.pt/) was created in February 2010 to provide a research ground on computing and telecommunications for Ambient Assisted Living (AAL). Funded by the author as an *ad-hoc* research team, the laboratory currently occupies room 6.9 in Pole 6 at UBI. At this date, ALLab is the research home for two post-doctoral researchers, six PhD students, six MSc students, and more than ten undergraduate students. ALLab has frequent cooperation with several European universities and research institutes, as well as with industry, as shown by the affiliation of the authors in several published papers. As a researcher, he defines and supervises some research activities and manages the respective grants, also contributing to write the projects the laboratory has successfully won and is currently submitting. Since 2018, ALLab is coordinated by Dr. Nuno Pombo.

President of the Scientific and Technologic Council of *Parkurbis* *Parque de Ciência e Tecnologia da Covilhã S.A*. since April 2019, Covilhã, Portugal, appointed as member by the municipality of Covilhã, and elected by the Council.

Parkurbis S.A. is a company incubator owned by the municipality of Covilhã, *IAPMEI - Instituto de Apoio às Pequenas e Médias Empresas e ao Investimento, PT Comunicações, S. A., Universidade da Beira Interior, Fundo de Reestruturação e Internacionalização Empresarial - Grupo CGD - Caixa Capital, Fundação Luso Americana para o Desenvolvimento, ANIL -*

Associação Nacional dos Industriais de Lanifícios, FRULACT - Sociedade Gestora de Participações Sociais, S. A., NERCAB - Núcleo Empresarial da Região de Castelo Branco, and the *Associação Empresarial dos Concelhos de Covilhã, Belmonte e Penamacor*. This position is held *pro bono* and the main tasks consist in evaluating and reporting on new candidate applicants and on the development of current companies hosted in the facilities of Parkurbis, as defined by the statutes of Parkurbis S.A..

1.4 Academic activities

May 2021 – February 2023: **Associate Professor** (tenure) at the Faculty of Engineering, Department of Computer Science, UBI.

As associate professor at UBI, he teaches undergraduate and graduate courses in the areas of computer networks and Ambient Assisted Living / Biosignal processing. He also supervises students at the undergraduate and graduate levels, and supervises Post-Doctoral researchers. The position as Associate Professor was achieved as result of an international call for applications.

January 2014 – February 2023: **Executive Committee Coordinator of BSAFE Lab**, Law Enforcement, Justice and Public Safety Laboratory, UBI.

BSAFE Lab (http://www.bsafe-lab.org/) was created in January 2014 as a flexible research structure gathering researchers on specific projects. It is hosted at the Computer Science department but it includes researchers from other departments, namely, Medical Sciences, Sociology, Psychology, Sports Sciences, and Management. The Executive Committee sits one representative from UBI (Nuno M. Garcia, Coordinator), one representative from Innovative Prison Systems Lda (Pedro das Neves), a Portuguese company with interests in this area, and one representative from Microsoft Portugal (Pedro Pinto Lourenço). Funded in 2014 BSAFE Lab joins nine PhDs and two PhD students from the Social Sciences and the Engineering around currently on-going ERASMUS+, DG Justice and other EU funded projects. As co-founder and coordinator, he supervises research activities and manages the grants and projects the laboratory has successfully won, and that are described in detail forward.

November 2010 – April 2022: **Coordinator and trainer of the Cisco Academy** at UBI.

In November 2010, he founded the Cisco Academy at the Computer Science department in UBI. The Cisco Academy has since been providing complementary training in the CCNA courses, in particular CCNA1, CCNA2, CCNA3 and CCNA4, and also in the Linux Essentials course. Since its creation, the Cisco Academy has organized over 40 courses, teaching 428 students, both students from UBI and students from industry and external at UBI, as the Academy also allows the enrolment of external students and professionals. As coordinator, he manages all training activities and the budget of the academy, including the planning of the continuous training for the trainers and the plans to provide suitable equipment to the academy. He also promotes the celebration of cooperation agreements with

companies and industry to train their collaborators at the Cisco Academy. A list of such agreements is provided in section 4.2. Also as coordinator of the Cisco Academy, in October 2013 he signed an agreement to establish a Pearson VUE Authorized Center (site ID 70992) at UBI, as a mean to further enable industry certification to the students and trainers of the Cisco Academy and to the surrounding community. Since its creation, Cisco Academy at UBI has generated over 68.000€ in income and now has one fully equipped CISCO Laboratory and another semi-equipped laboratory at the facilities of the university's training department, CFIUTE (*Centro de Formação Interação UBI Tecido Empresarial*). It has also contributed to reinforce the equipment installed at the Networks Laboratory of the Computer Science Department of UBI. As trainer at the Cisco Academy, he has obtained the following certifications (Cisco ID: CSCO12808868):

August 2016: Cisco Certified Network Associate Security (CCNA Security);
March 2016: Cisco Certified Network Professional (CCNP);
August 2015: Cisco Certified Network Professional (CCNP Switching);
May 2015: Cisco Certified Network Associate (CCNA).

July 2020: **Invited Professor at the *Instituto Politécnico de Viseu***, Portugal, teaching the course on Applications for Ambient Assisted Living in the *Verão com Ciência* FCT funded course on *Aplicações IoT para a área da saúde*.

January 2020: **Invited Professor at the *Universidade do Mindelo***, Mindelo, Cabo Verde, chairing the Network Planning and Management curricular unit for the MSc course in Computer Science Engineering.

April 2018, September 2015, October 2012 and October 2011: **Invited Associate Professor at the Addis Ababa University** (AAU), Addis Ababa, Ethiopia, chairing the Advanced Topics in Computer Science curricular unit for the PhD course in Software Engineering.

November 2017 – October 2019: **Secretary of the Computer Science Department Scientific Commission** (elected), UBI.

August 2015 – September 2015: **Invited Associate Professor at the *Universiti Teknologi Malaysia***, Johor Bahru and Kuala Lumpur, Malaysia.

October 2012 – October 2013: **Director of the Computer Science and Engineering Bachelor of Science degree program** (appointed), UBI.

October 2012 – February 2023: **Invited Associate Professor**, ULHT.

July 2012 – October 2012: **Full time Associate Professor**, ULHT.

May 2012 – October 2012: **Member of the Scientific Council** of the Computer Science and Information Systems Department of the ECATI (elected), ULHT.

May 2012 – October 2012: **Member of the Pedagogical Council** of the Computer Science and Information Systems Department of the ECATI (elected), ULHT.

May 2011 – May 2012: **Member of the Pedagogical Council** of the Computer Science and Information Systems Department of the ECATI (elected), ULHT.

May 2011 – May 2012: **Member of the Scientific Council** of the Computer Science and Information Systems Department of the ECATI (elected), ULHT.

February 2012 – May 2021: **Assistant Professor** at the Faculty of Engineering, Department of Computer Science, UBI (hired as result of an international call for applications).

November 2010 – today: **Certified instructor** for the following courses at the Cisco Academy at UBI, of which stand all the Cisco Certified Network Associate (CCNA) and Cisco Certified Network Professional (CCNP) courses: IT Essentials: PC Hardware and Software, CCNA R&S: Introduction to Networks, CCNA R&S: Routing and Switching Essentials, CCNA R&S: Scaling Networks, CCNA R&S: Connecting Networks, CCNA R&S 6.0 Bridging, CCNA Discovery 1: Networking for Nome and Small Business, CCNA Discovery 2: Working at a Small-to-Medium Business or ISP, CCNA Discovery 3: Introducing Routing and Switching In the Enterprise, CCNA Discovery 4: Designing and Supporting Computer Networks, CCNA Exploration 1: Network Fundamentals, CCNA Exploration 2: Routing Protocols and Concepts, CCNA Exploration 3: LAN Switching and Wireless, CCNA Exploration 4: Accessing the WAN, CCNA Security, CCNP ROUTE: Implementing IP Routing, CCNP SWITCH: Implementing IP Switching, CCNP TSHOOT: Maintaining and Troubleshooting IP Networks, Networking Essentials, Introduction to the Internet of Everything, Introduction to IoT, IoT Fundamentals: Connecting Things, IoT Fundamentals: Big Data & Analytics, IoT Fundamentals: Hackathon Playbook, Introduction to Cybersecurity, Cybersecurity Essentials, Get Connected, Smart Grid Essentials, Packet Tracer Know How 1: Packet Tracer 101, Mobility Fundamentals, NDG Linux Essentials, NDG Linux I, NDG Linux II, CPA - Programming Essentials in C++, CLA - Programming Essentials in C, Computing for Schools.

September 2010 – February 2023: **Member of the Scientific Commission** of the Computer Science Department of UBI.

May 2010 – February 2023: **Invited researcher at the Textile and Paper Materials Research Unit** (UMTP), Faculty of Engineering, UBI.

February 2010 – August 2011: **Invited Assistant Professor** at the Faculty of Engineering, Department of Computer Science, UBI.

December 2009 – December 2011: **Member of the Pedagogical Council** (elected) of the ULHT.

December 2009 – 2011: **Member of the Scientific Council** of the Course on Computer Engineering, ULHT.

December 2009 – 2011: **Member of the Scientific Council** of the Course on Management Informatics, ULHT.

March 2009 – June 2012: **Full time Assistant Professor**, ULHT.

March 2009 – August 2009: **Invited Assistant Professor**, ***Universidade Autónoma de Lisboa*** **(UAL)**, Lisbon, Portugal.

February 2009 – July 2009: **Invited Professor at the** ***Escola Superior de Saúde, Instituto Politécnico da Guarda*** (IPG), chairing the curricular unit of Communication and Information Systems, Guarda, Portugal.

September 2007 – February 2009: **Invited Assistant Professor**, ULHT.

September 2007 – October 2012: **Researcher,** Research Centre for Applied Communication, Culture and New Technologies (*Centro de Investigação em Comunicação Aplicada, Cultura e Novas Tecnologias - CICANT*), ULHT.

September 2007 – March 2009: **Assistant Professor**, Department of Science and Technologies, UAL.

July 2004 – November 2008: ***PhD*** **student**, University of Beira Interior, while member of the Research Department of Siemens SA, Lisbon, Portugal.

February 2004 – February 2010: **member of the** ***Network and Multimedia Computing Group*** *(NMGC),* IT branch at UBI.

2002 – 2004: **Member of the Senate** of the University of Beira Interior (elected), representing the students of the Scientific and Pedagogical Unit of Exact Sciences, UBI.

2002 – 2004: **Member of the General Assembly** (elected)**,** UBI.

1.5 Other professional relevant experience

January 2018 – November 2021: **Vice-Dean, Faculty of Engineering**, UBI.

As Vice-Dean of the Faculty of Engineering, he has the task of assisting the Dean of the Faculty, Dr. Sílvio Mariano, in the duties that are specific to the Dean, as defined in the Statutes of the University (Num. 2, Art. 31, *Despacho Normativo 10/2021,* published in the *Diário da Républica, 2ª Série, Nº 56,* 22 March 2021).

September 2020 – April 2022: **Chair of the ITC Conference Grants** for the COST Action CA 19143 GDHRNet (elected).

As Chair of the International Conference Grants committee of COST Action CA 19143, his duties consist in presiding the committee that performs the evaluation of the applications for

conference grants, and to award or not the requested grant based on committee's evaluation of the applications. The 2020 budget for these grants is initially set to 4.000€.

July 2020 – April 2024: **President of the General Assembly** of the *Rádio Clube da Covilhã* CRL (elected).

As President of the General Assembly of the local radio, his duties consist in defining the dates for the ordinary and extraordinary assembly meetings of the cooperative, and preside to these meetings.

June 2019 – April 2021: **Chair of the ITC Conference Grants** for the COST Action CA 16226 SHELD-ON (elected).

As Chair of the International Conference Grants committee of COST Action CA 16226, his duties consist in presiding the committee that performs the evaluation of the applications for conference grants, and to award or not the requested grant based on committee's evaluation of the applications. The yearly budget for these grants is variable, but usually around 10.000€.

June 2019 – October 2019: **Chair of the STSM Committee** for the COST Action CA 16226 SHELD-ON (elected).

As Chair of the Short-Term Scientific Mission committee of COST Action CA 16226, his duties consist in presiding the committee that performs the evaluation of the applications for short term scientific missions, and to award or not the requested grant based on committee's evaluation of the applications. The yearly budget for these grants is variable, but usually around 30.000€.

December 2012 – December 2016: **Head of Laboratory at EyeSee Lda.**, Lisbon, Portugal.

In 2012 EyeSee (http://www.eyeseesolutions.com/) established a cooperation agreement with UBI, in which the company declared its intention to develop research at UBI through the funding of scholarships and laboratory equipment. Since December 2012 and as head of EyeSee Laboratory, he coordinated the research work of students who receive scholarships from EyeSee. The EyeSee project at UBI has been funded with over 38.000€.

August 2008 – April 2010: **Head of Research, Plux*, Engenharia de Biosensores, Lda.,*** Covilhã and Lisbon, Portugal.

As Head of Research of PLUX, his role consisted in developing new solutions and new products that could be marketable, to engage in communications with the prospective and current customers, and also to contribute to the CE marking of some of the company's products.

December 2007 – July 2008: **System Architect in the Operations and Business Software Department, Element Operation unit, *Nokia Siemens Networks Portugal S.A.*,** Lisbon, Portugal.

As System Architect at Nokia Siemens Networks he was responsible for the verification of specifications for several high-end Siemens routers.

April 2007 – December 2007: **OSS/Networks Team Leader of the Development Center Portugal of *Nokia Siemens Networks S.A.***, Lisbon, Portugal.

As Research Team Leader at Nokia Siemens Networks he was responsible for the coordination and prosecution of the research goals for a team of four researchers.

July 2004 – November 2007: **Member of the Research Department of the Development Center Portugal of *Nokia Siemens Networks S.A.***, Lisbon, Portugal.

As member of the Research team at Nokia Siemens Networks he was responsible for developing research that was aligned with both the academic goals of his *PhD* but also with the commercial and research interests of the company.

1988 – 2004: **Founder and administrator of the companies *Tropical Software Lda.* and *International Software Lda.***, Covilhã, Portugal.

As administrator of these companies he was responsible for all aspects of company life, including finances, relations with customers and suppliers, and in *Tropical Software*, he was responsible for the development and research of new software products, managing a team of programmers.

1.6 Other personal relevant experience

June 2022 – June 2023: Treasurer of the *Lions Clube da Covilhã* (elected).

June 2021 – June 2022, June 2020 – June 2021, June 2019 – June 2020, June 2003 – June 2004: President of the *Lions Clube da Covilhã* (elected).

June 2020 – June 2021, September 2015 – September 2016: President of the Division 9 for the Portuguese Lions Centre North District (D115CN) (appointed).

June 2019 – June 2020, June 2018 – June 2019: Member of the Governor's Cabinet for the Lions District 115 CN, with the functions of International Relations (appointed).

January 2021 – December 2021, January 2020 – December 2020, January 2017 – December 2017, January 2016 – December 2016: Member of the Fiscal Council of the *Associação de Antigos Alunos Universitários da Beira Interior.*

October 2017: Candidate for the 2017 municipal elections on the list of the *Partido Socialista*, as independent at the 11th position. The list was most voted in these elections, having secured 5 of the 7 available positions. The list was headed by the current President of the municipality of Covilhã, Vitor Pereira, currently in his 2nd term in office.

Mai 2017 – May 2018: Member of the Board of Directors of the *Associação de Antigos Alunos Universitários da Beira Interior* (elected).

April 2015 – April 2016, April 2010 – April 2011: Secretary of the *Lions Clube da Covilhã* (elected).

April 2014 – April 2015: President of the General Assembly of the *Lions Clube da Covilhã,* for the 2014-2015 term (elected).

July 2013: Councillor representing Non-Commercial Support Group (NCSG) at the Generic Names Supporting Organization (GNSO) of the ICANN (Internet Corporation for Assigned Names and Numbers (ICANN), during the 47th ICANN Meeting at Durban, South Africa (elected).

April 2013 – April 2014, April 2011 – April 2012, April 2009 – April 2010: Vice-President of the *Lions Clube da Covilhã* (elected).

November 2012: Member of the Membership Affairs Team of the Non-Commercial Users Constituency (NCUC) of the Generic Names Supporting Organization (GNSO) of the Internet Corporation for Assigned Names and Numbers (ICANN) for the 2012-2013, 2013-2014, and 2014-2015 term (appointed).

November 2011 – November 2012: Member of the Executive Committee of the Non-Commercial Users Constituency (NCUC) of the Generic Names Supporting Organization (GNSO) of the Internet Corporation for Assigned Names and Numbers (ICANN), representing Europe (2017) for the 2011-2012 term (elected).

2011 – 2012, 2009 – 2011: Member of the General Council of the *Escola Secundária Frei Heitor Pinto*, Covilhã, Portugal (elected).

February 2011: Registered as trainer at the *Conselho Científico-Pedagógico da Formação Contínua* with the number CCPFC/RFO-28790/11 for the areas A40 (Computer Science) and C15 (Education Technologies-Computer Science, Application of Computer Science).

January 2009: renewal of the Certificate as Professional Trainer (*Certificado de Aptidão Profissional, CAP*) n. EDF 1973/98 DC, issued by the Portuguese Institute of Employment and Professional Training (*Instituto do Emprego e Formação Profissional - IEFP*).

November 2002 – November 2003: President of the Computer Science Group (*Núcleo de Informática da Universidade da Beira Interior* - NINF) for the 2002/2003 term (elected).

2002 – today: Member of the *Lions Clube da Covilhã*.

June 1998: receives the Certificate of Professional Trainer n. EDF 1973/98 DC, issued by the IEFP .

1997 – 2011: serves as a President, President of the General Assembly and other positions in several local and national associations, including parents' associations (elected).

1.7 Online Curriculum Vitae and scientific publication links

- https://www.scopus.com/authid/detail.uri?authorId=8229776000
- https://publons.com/researcher/1314376/nuno-m-garcia/
- http://orcid.org/0000-0002-3195-3168
- https://scholar.google.pt/citations?user=eCOZ3t8AAAAJ
- https://ieeexplore.ieee.org/search/searchresult.jsp?action=search&newsearch=true&searchField=Search_All&matchBoolean=true&queryText=((%22Authors%22:nuno%20garcia)%20OR%20%22Authors%22:nuno%20m%20garcia)
- https://academic.microsoft.com/search?q=Nuno%20M.%20Garcia&f=Composite(AA.AuId%3D2251300959)&orderBy=1
- https://www.semanticscholar.org/author/Nuno-M.-Garcia/2112807
- https://ubi.academia.edu/NunoGarcia
- https://www.researchgate.net/profile/Nuno_Garcia
- http://www.informatik.uni-trier.de/~ley/pers/hd/g/Garcia:Nuno_M=.html

1.8 Languages

Written and spoken fluently: Portuguese, English, French and Spanish.

Basic understanding, speaking, reading and writing Italian.

Some understanding, reading and writing: German.

1.9 Other information

Member of the Internet Corporation for Assigned Names and Numbers (ICANN) Non-Commercial Users Constituency (NCUC, https://community.icann.org/display/gnsononcomstake/Membership).

Member of the Internet Society (ISOC).

Has visited the following countries: Andorra, Angola, Australia, Austria, Brazil, Belgium, Bulgaria, Canada, Cape Verde, Croatia, Cyprus, Denmark, Egypt, England, Ethiopia, Estonia, Finland, France, Germany, Greece, Guinea-Bissau, Ireland, Italy, Lichtenstein, Lithuania, Republic of North Macedonia, Malaysia, Malta, Nederlands, Norway, Poland, Romania, Russia, San Marino, Serbia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, United Arab Emirates, and the United States of America.

1.10 Timeline

The following charts present an overview of the most notable events from 1983 to 2020 (or 2023 in the case of ongoing projects), Figure 1 showing a legend for the timeline charts.

The first chart shows data from 1983 to 2004 (Figure 2), being 1983 the beginning of the undergraduate studies of the author at the *Instituto Universitário da Beira Interior*, Covilhã, Portugal, and 2004 the year of the graduation on Mathematics / Computer Science.

The second chart (Figure 3), spans the period from 2004 to 2012, comprehending the start of his PhD research at Siemens S.A. and the year where the author won one of the three positions open as international tender for Assistant Professor at UBI.

The third chart shows the period from 2012, date when the author was hired as Assistant Professor at UBI to end of 2017, corresponding to the mandatory 5-year probation period of his public service contract (Figure 4).

Figure 5 shows relevant events from 2017 up to the date of this document.

Finally, Figure 6 shows the sequence of competitive international projects approved in the context of both ALLab and BSAFE Lab, comprehending the period between 2012 and 2023.

The boundary years may be replicated to allow a better illustration of the events in each of the contexts.

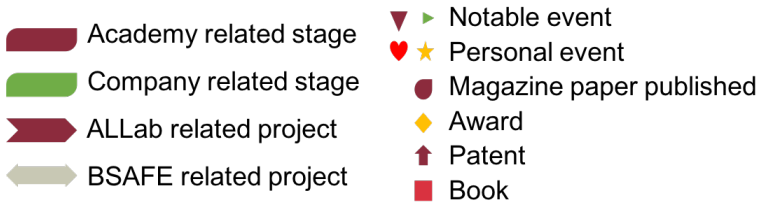

Figure 1 – Legend for the timeline charts.

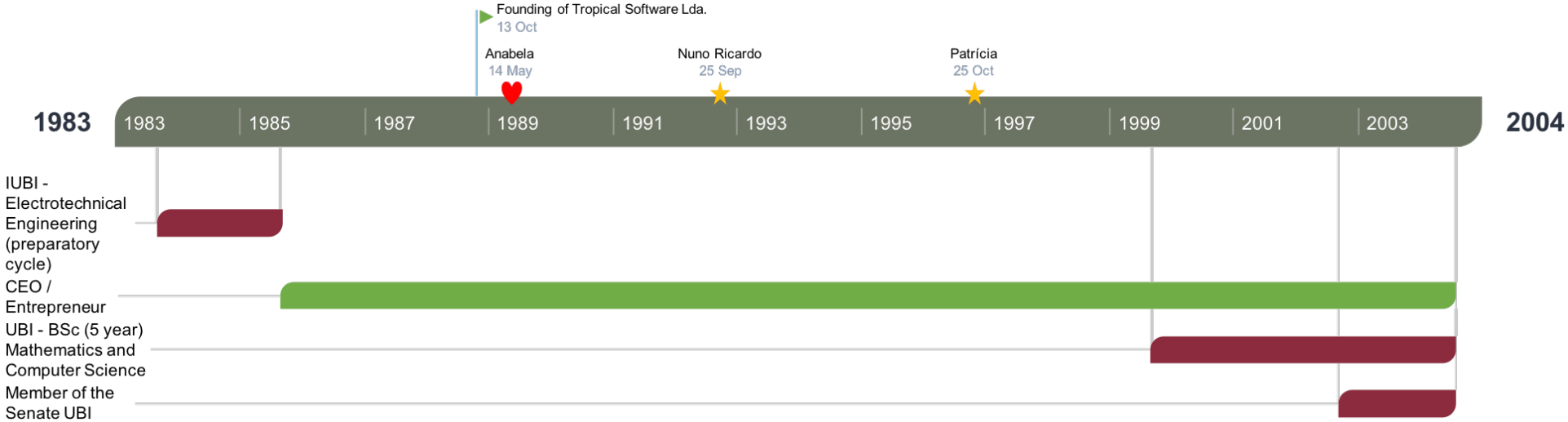

Figure 2 – Timeline from 1983 to 2004.

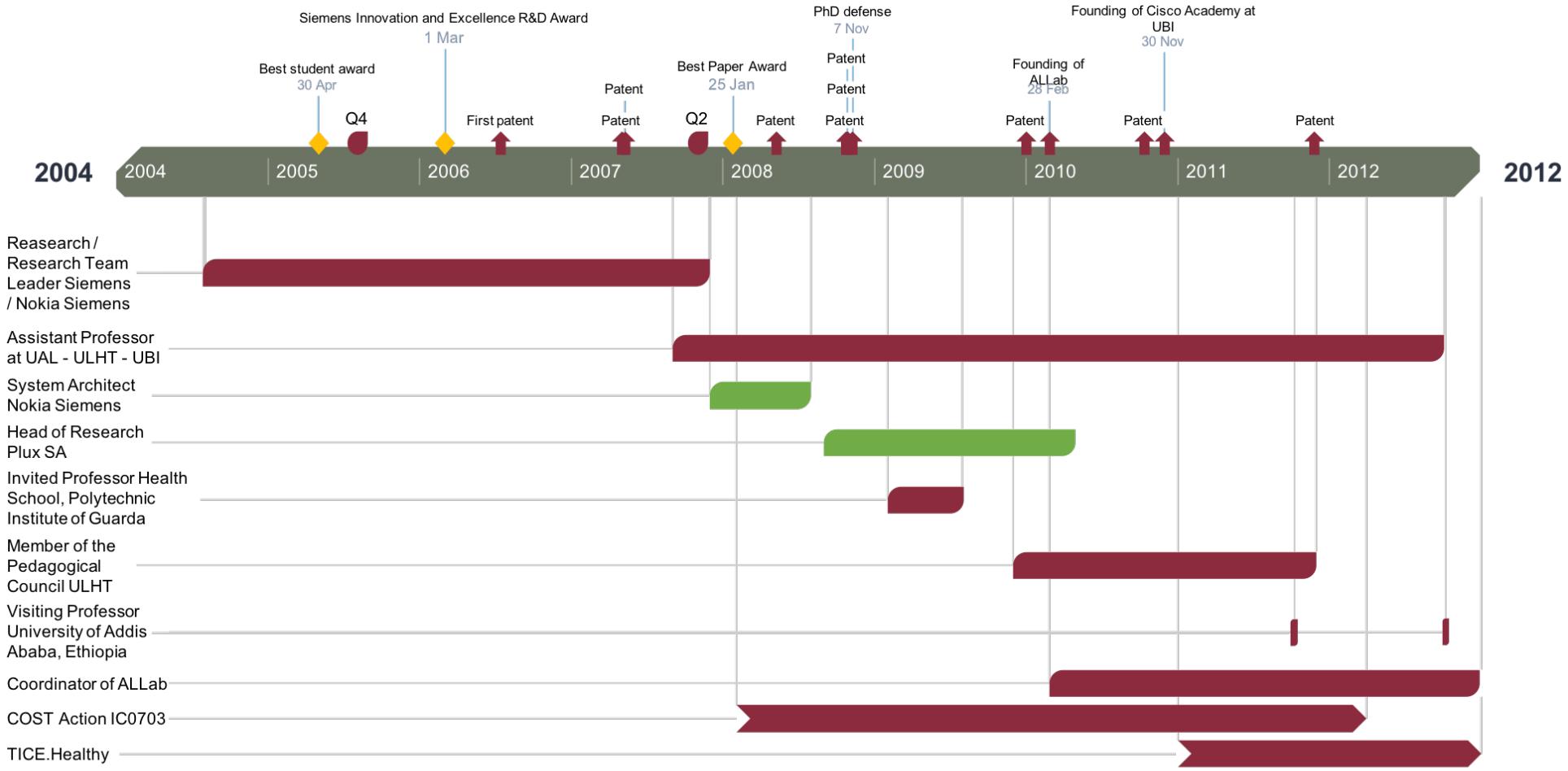

Figure 3 – Timeline from 2004 to 2012.

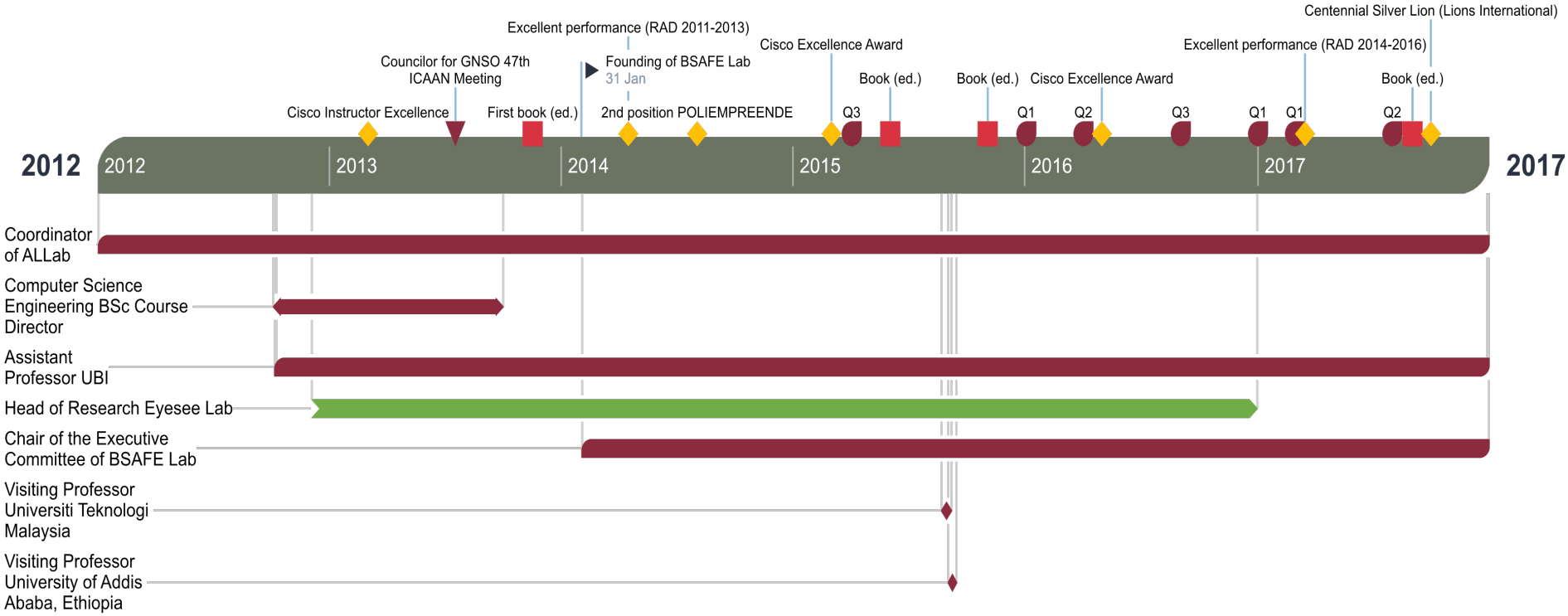

Figure 4 – Timeline from 2012 to end of 2017.

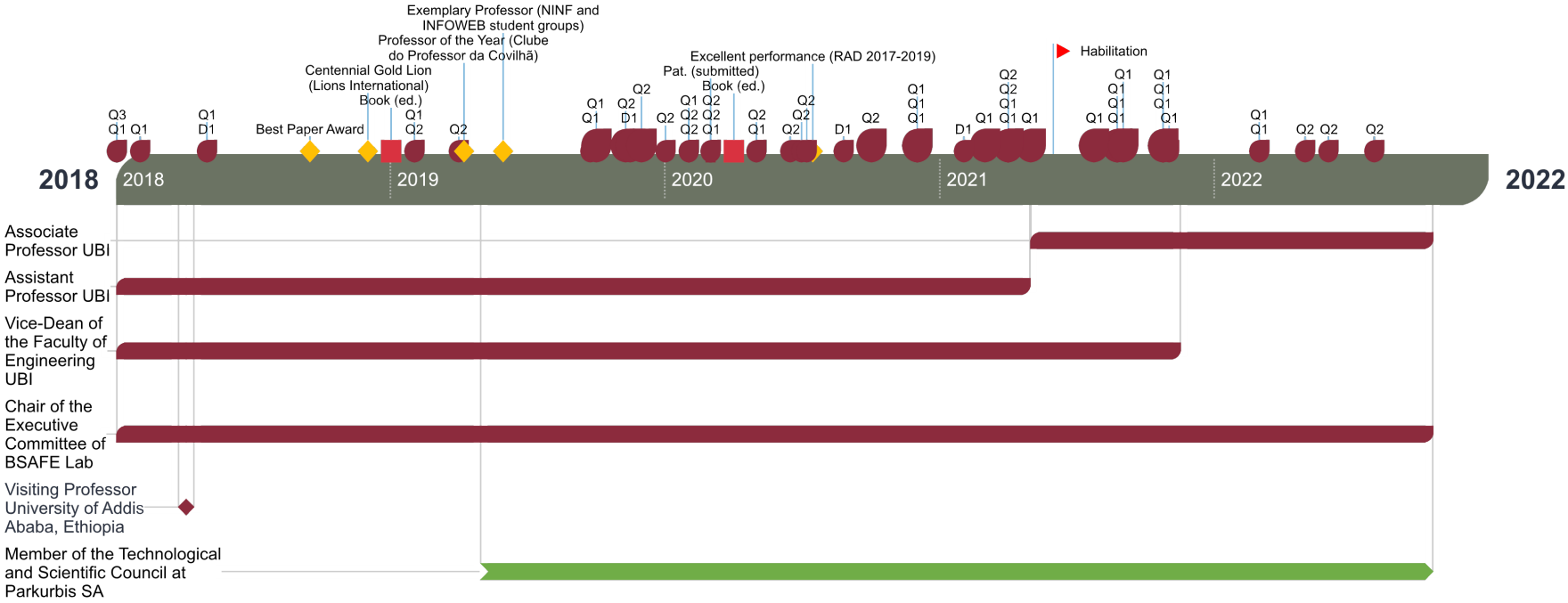

Figure 5 – Timeline from 2018 to 19-10- 2022.

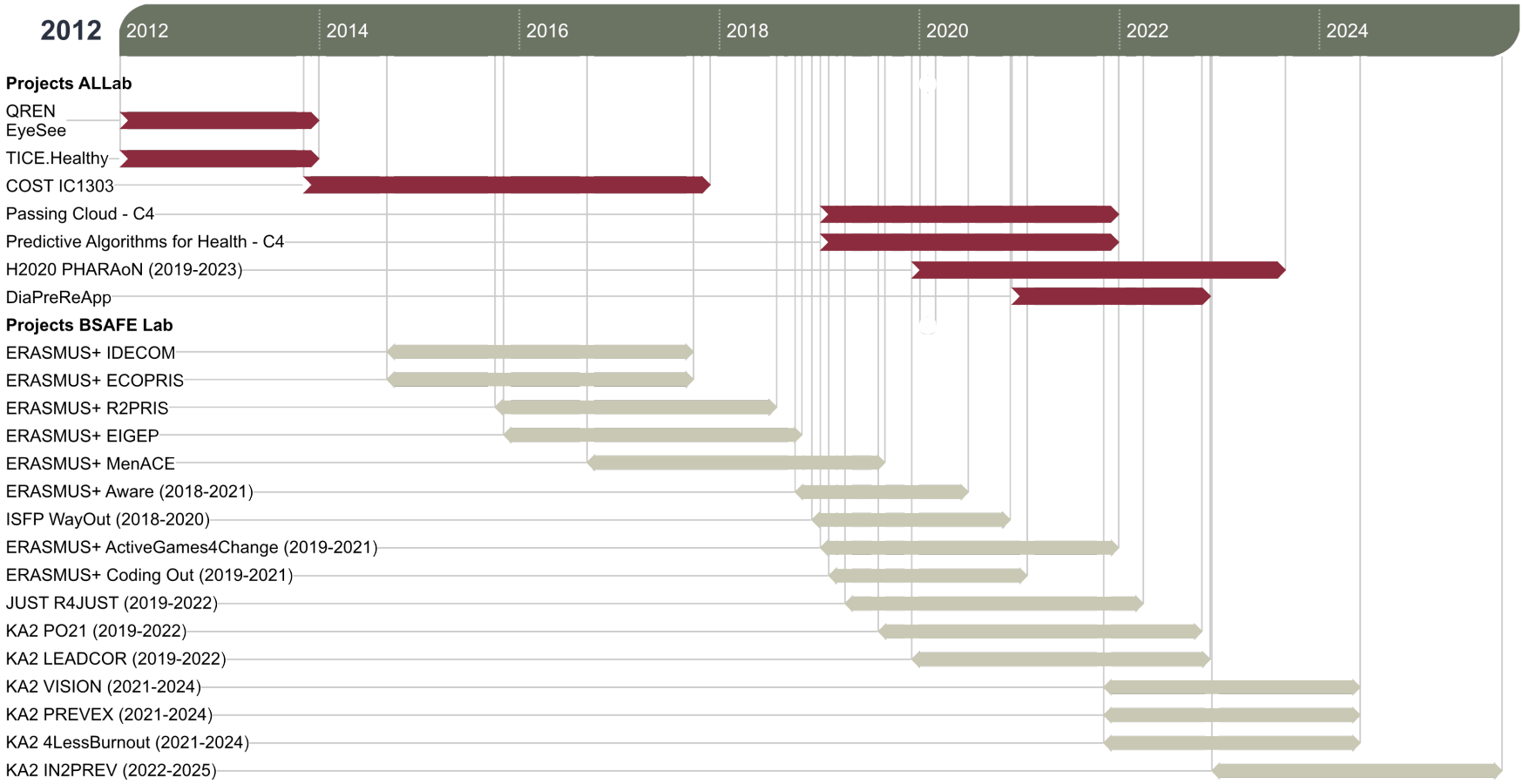

Figure 6 – Timeline for projects (ALLab and BSAFE Lab) from 2012 to 2025.

2 Part A – Teaching activities

2.1 Part A- 1) Teaching activities

In the second semester of 2022/2023, he took over the Curricular Unit of Modelling and Simulation for Medicine, in the context of his new position as Full Professor of Biomedical Engineering at the Faculty of Sciences of the University of Lisbon. This is a curricular unit of the MSc course on Biophysical and Biomedical Engineering at FCUL.

Since 2012 and up until February 2023, teaching activities at the university level have been mostly focused on Computer Networks, Internet Technologies and Final Project courses at the undergraduate level, on Computer Networks, and Software Engineering at the MSc level, and on Advanced Topics for Engineering, Biosignal Processing and Ambient Assisted Living at the PhD level.

From 2008 to 2012, teaching activities were developed as a complement to intense industry work, first a Nokia Siemens Networks S.A. and after that, at PLUX S.A. Worth mentioning is also the author's experience as a high-school teacher, from 1987 to 1994.

In addition to the teaching duties at UBI, a small resume of the teaching activities can be described as follows, in chronological order for the starting of the activities, still on-going:

- 2010-today: instructor at the Cisco Academy at UBI;
- 2010-today: trainer at the *Centro de Formação da Associação de Escolas da Beira Interior*;

and, for activities currently finished:

- 2007-2017: teaching undergraduate BSc and MSc at ULHT;
- 2007-2019: teaching undergraduate BSc courses at UAL, PhD courses at Addis Ababa University (Addis Ababa, Ethiopia) and MSc courses at IPG;
- 2015: teaching networking courses at Universiti Teknologi Malaysia, Johor Bahru and Kuala Lumpur, Malaysia;
- 2006-2008: instructor for several modules at the post-secondary level V technologic specializations course (*Curso de Especialização Tecnológica* - CET);
- October 1987 - August 1994, April 2002 - August 2002: Computer Science teacher and Computer Science group leader at secondary high schools, Covilhã, Portugal.

In the second semester of 2015/2016 there were no teaching activities at UBI as he was granted a sabbatical leave for that semester.

Detailed class names and courses taught can be found in the table in ANNEX C - Detailed teaching activities, giving evidence of a diverse teaching activity, spanning several scientific areas, with higher relevance to the Computer Networks, Medical Informatics and Programming. Also, there is evidence of balance between laboratorial and classroom classes both for undergraduate and graduate courses.

The following charts show an overview of the teaching activities from 2007 until 2019/2020. Figure 7 shows the ratios of hours of classes taught for BSc courses, showing 75% of classes being on topics such as Computer Network and Programming, with Computer Networks accounting for almost 50% of the teaching hours. Figure 8 shows the corresponding data for MSc courses, showing 84% of classes being on Computer Networks, Programming and Software Engineering.

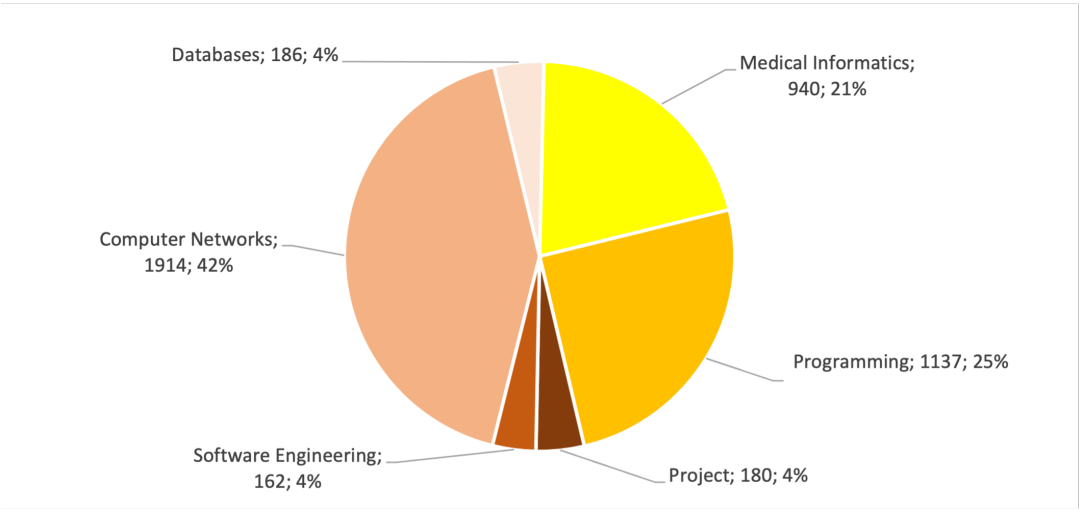

Figure 7 – Hours taught per Scientific Area for the BSc Courses (showing name of the area, hours, ratio).

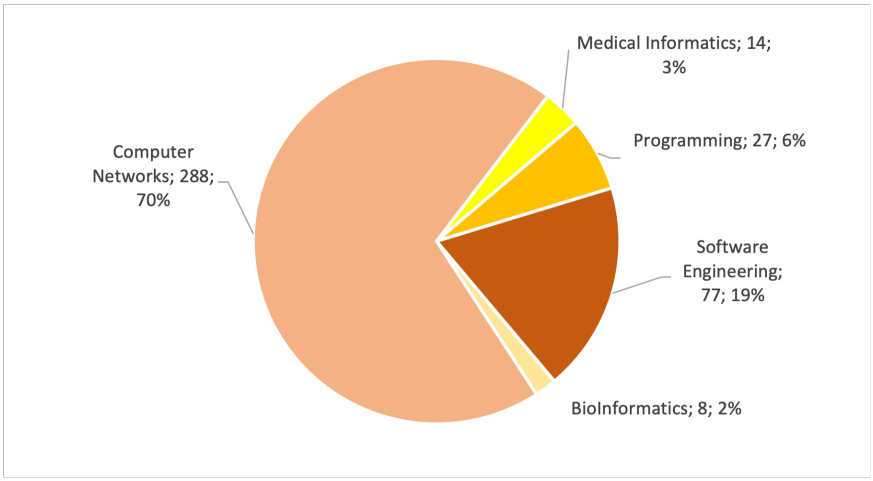

Figure 8 – Hours taught per Scientific Area for the MSc Courses (showing name of the area, hours, ratio).

Figure 9 presents the data for PhD courses, with 40% of the class time being spend on the Advanced Topics for Computer Science course (AAU). Figure 10 shows the comparison between number of hours taught for the BSc, MSc and PhD courses, the latter only accounting 5% of the overall teaching effort. This is part due to the fact that PhD classes have a very reduced number of enrolled students, and also these classes only started taking place after 2011.

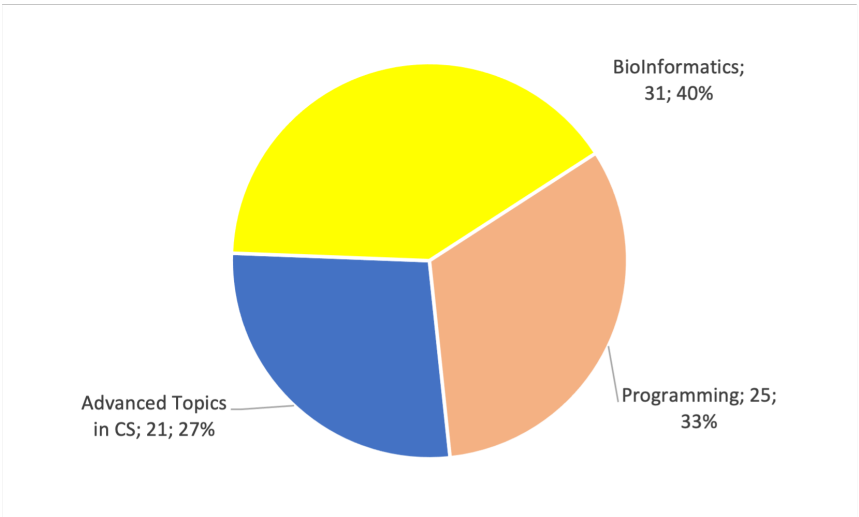

Figure 9 – Hours taught per Scientific Area for the PhD Courses (showing name of the area, hours, ratio).

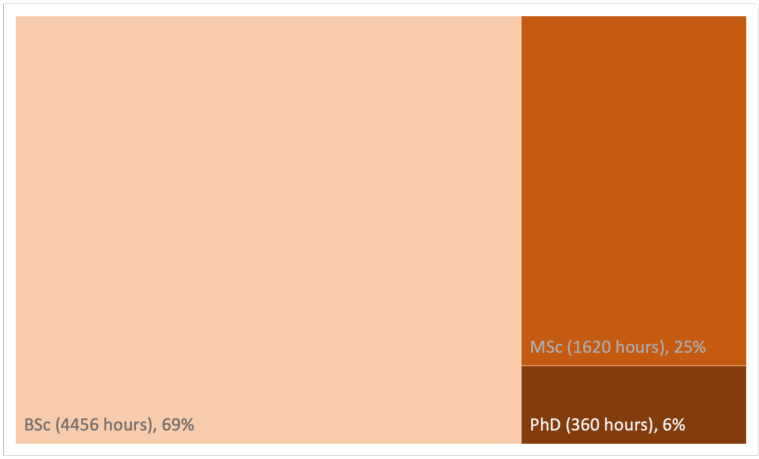

Figure 10 – Hours taught in each Course level (showing level of the course and ratios).

Figure 11 shows the ratios for practical and theoretical classes for the BSc and MSc courses. Figure 12 shows the breakdown on number of enrolled students from 2007 to today, per course level (BSc, MSc and PhD) and per area.

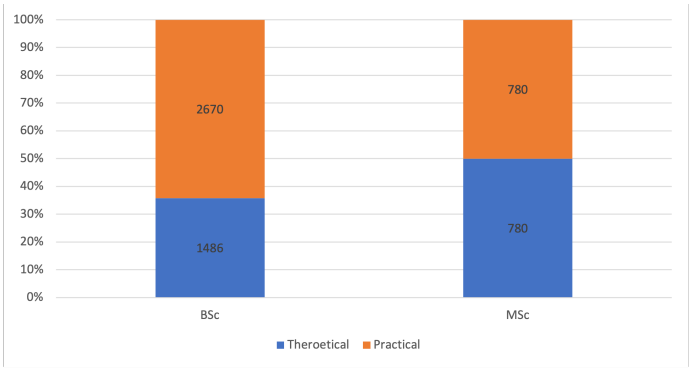

Figure 11 – Laboratory and Classroom (Practical and Theoretical) ratios and hours taught per for the BSc and MSc Courses (values are in hours).

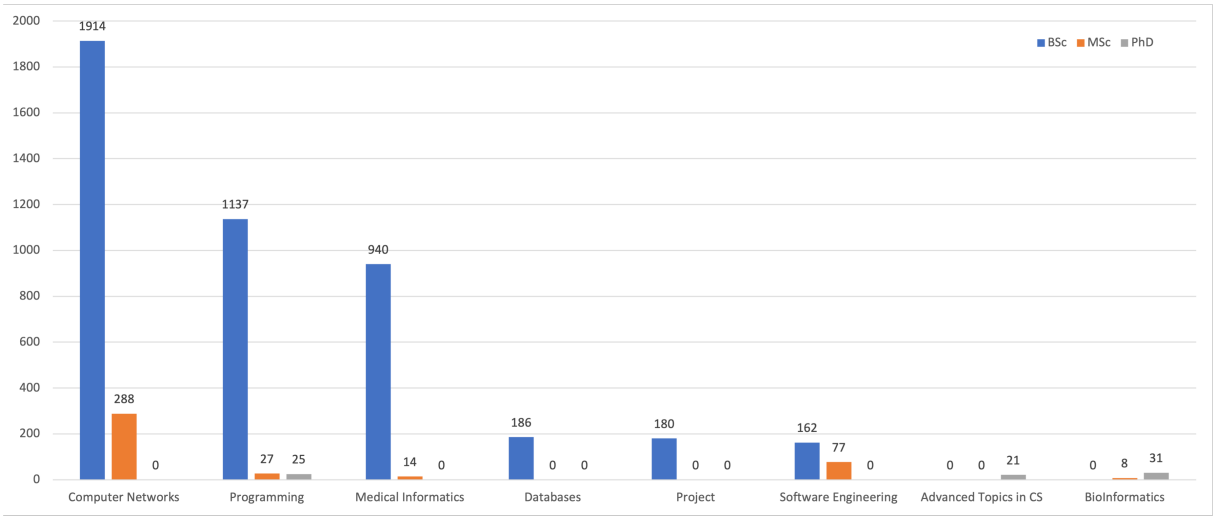

Figure 12 – Students enrolled in classes per area for BSc, MSc and PhD Courses (values are number of students).

Coordination of curricular units in BSc courses

Since 2007/2008 he has coordinated several curricular units at BSc courses, spanning very different topics in Computer Science, from Communication and Information Systems for the BSc course in Nursing, to Programming for the BSc courses in Computer Science Engineering, Management Informatics, Bioengineering and Biomedical Sciences, passing by Computer Networks and Software Engineering to the Computer Science Engineering BSc course.

Weighting the topics taught with the sum of the number of students, Table 1 can present an approximate estimation of the teaching effort by scientific area.

Table 1 – Summary of teaching activities coordinated in BSc courses.

Topic / Area	Number of students	Number of different curricular units	Hours of classes taught
Computer Networks	1914	9	3060
Programming	1137	6	1545
Medical Informatics / Bioinformatics	940	2	511
Databases	186	1	210
Project (all areas)	180	1	270
Software Engineering	162	3	720

The first column describes the scientific area where the different curricular units were taught, the second column contains the number of students in this area, the third and fourth columns contain the number of curricular units considered for each area and the number of semesters where these units were taught.

Coordination of curricular units in MSc and post-graduate courses

Since 2007/2008 he has coordinated eleven different curricular units at MSc and post-graduate courses, spanning mostly three areas in Computer Science: Computer Networks, Programming and Software Engineering. Table 2, sorted by decreasing number of students, summarizes the coordination activities in curricular units for MSc and post-graduate courses. The column contents are similar to those in Table 1.

Table 2 – Summary of teaching activities coordinated in MSc courses.

Topic / Area	Number of students	Number of different curricular units	Hours of classes taught
Computer Networks	288	9	840
Software Engineering	77	2	300
Medical Informatics	49	3	218
Programming	27	2	240
BioInformatics	8	1	120

Coordination of curricular units in PhD courses

Since 2014/2015 he has coordinated 2 curricular units at the PhD course on Computer Science and Engineering at UBI, focusing on the areas of Ambient Assisted Living and on Biosignal Processing. Additionally, he has been invited to coordinate the curricular unit of Advanced Topics in Computer Science at the PhD course on Computer Engineering, Software Engineering track, Addis Ababa University, Addis Ababa, Ethiopia. Table 3 shows the summary for the courses taught at the PhD level, sorted by decreasing number of students. Additional details can be found in ANNEX C - Detailed teaching activities.

Table 3 – Summary of teaching activities coordinated in PhD courses.

Topic / Area	Number of students	Number of different curricular units	Hours of classes taught
Medical Informatics / Bioinformatics	31	1	135
Programming	25	1	105
Advanced Topics in Computer Science	21	1	120

Other pedagogic activities in curricular units

The details for the teaching activities can be found in ANNEX C - Detailed teaching activities. Table 4 presents a summary of the curricular units taught while being coordinated by another colleague. The data regarding graduate and undergraduate courses is organized as in Table 1.

Table 4 – Summary of other teaching activities while being coordinated.

Topic / Area	Number of students	Number of different curricular units	Hours of classes taught
Medical Informatics	838	1	30
Programming	485	4	720
Project	140	1	255
Computer Networks	114	3	210
Software Engineering*	15	1	60

* MSc course, all the others refer to BSc courses.

Evaluation of the pedagogic activity and approval rates

The University of Beira Interior has implemented a quality assurance system that is partially based on questionnaires that students are invited to fill when each semester ends. One of the questionnaires students are asked to reply is focused on the assessment of the student's perception of the quality of the teaching activities, including the perceived performance of the teacher.

For the years 2020/2021 and 2021/2022, UBI's platform provides a summary of responses in a graphical manner, whose general statistics are copied into this section. Table 5 and Table 6 show the number of responses from students regarding the years 2021/2022 and 2020/2021, respectively. It can be seen that for some curricular units, the responses cannot be taken as representative, as only a small percentage of students replied.

Based on the responses for these curricular units, the university's platform provides charts showing the degree of satisfaction of the students who responded to the inquiries. Figure 13 and Figure 14 show the summary of the responses for the years 2022/2021 and 2021/2020. The number of the questions (in the x-axis) and its respective text (original in Portuguese and in English), are described in Table 7.

Table 5 – Summary of student responses to the pedagogic inquiries for 2021/2022 (in Portuguese).

Universo das Respostas

Curso	MEDICINA			INFORMÁTICA WEB			ENGENHARIA INFORMÁTICA			ENGENHARIA INFORMÁTICA			CIÊNCIAS BIOMÉDICAS			TOTAL		
UC	Inscritos	Respostas	%	Inscritos	Respostas	%	Inscritos	Respostas	%	Inscritos	Respostas	%	Inscritos	Respostas	%	Inscritos	Respostas	%
COMPUTADORES E PROGRAMAÇÃO													49	12	24.49%	49	12	24.49%
AMBIENTES DE VIDA ASSISTIDA										2	1	50.00%				2	1	50.00%
TÓPICOS DE PROCESSAMENTO DE BIOSSINAIS										2	1	50.00%				2	1	50.00%
REDES E SERVIÇOS INTERNET				43	7	16.28%										43	7	16.28%
REDES DE COMPUTADORES							120	21	17.50%							120	21	17.50%
ADMINISTRAÇÃO DE SISTEMAS EM REDE							88	40	45.45%							88	40	45.45%
INICIAÇÃO À MEDICINA	175	5	2.86%													175	5	2.86%
TOTAL	175	5	2.86%	43	7	16.28%	208	61	29.33%	4	2	50.00%	49	12	24.49%	479	87	18.16%

Table 6 – Summary of student responses to the pedagogic inquiries for 2020/2021 (in Portuguese).

Universo das Respostas

Curso	INFORMÁTICA WEB			ENGENHARIA INFORMÁTICA			ENGENHARIA INFORMÁTICA			CIÊNCIAS BIOMÉDICAS			TOTAL		
UC	Inscritos	Respostas	%	Inscritos	Respostas	%	Inscritos	Respostas	%	Inscritos	Respostas	%	Inscritos	Respostas	%
COMPUTADORES E PROGRAMAÇÃO										49	27	55.10%	49	27	55.10%
PROTOCOLOS DE COMUNICAÇÃO							36	13	36.11%				36	13	36.11%
REDES DE COMPUTADORES				167	60	35.93%							167	60	35.93%
ADMINISTRAÇÃO DE SISTEMAS EM REDE				93	36	38.71%							93	36	38.71%
REDES E SERVIÇOS INTERNET	53	5	9.43%										53	5	9.43%
TOTAL	53	5	9.43%	260	96	36.92%	36	13	36.11%	49	27	55.10%	398	141	35.43%

Table 7 – Number and text of the questions in the inquiry (in Portuguese and English).

Number of the question	Original question text (in Portuguese)	Translated text (in English)
3	*Satisfação Global*	Overall satisfaction
130	*Estabelecimento das regras de funcionamento e de avaliação da UC, no início do semestre/ano*	Definition of the rules of the CU and the assessment rules, at the beginning of the semester / year
133	*Organização e estruturação dos conteúdos e atividades da UC*	Organization and structure of the contents and activities within the CU
136	*Clareza na exposição dos conteúdos programáticos*	Clarity in the explanation of the programme contents
139	*Cumprimento dos horários estabelecidos para as aulas*	Respect for the class defined schedule
142	*Promoção da reflexão crítica dos estudantes*	Engaging the students in critical thinking
145	*Disponibilidade para o atendimento aos estudantes*	Availability to attend students
148	*Utilização das tecnologias de informação e comunicação (Moodle, páginas web, e-learning, etc.)*	Use of information and communication technologies (Moodle, web-pages, e-learning, *etc*.)
151	*Respeito pelos estudantes*	Respect for the students
154	*Cumprimento das regras de funcionamento e de avaliação acordadas com os estudantes*	Respect for the assessment rules agreed with the students

It can be seen from a quick analysis to Figure 13 and Figure 14 that there is a clearly positive perception of the teaching activities, despite a small decrease occurred from 2020 to 2022. This may be yet another consequence of the changes in the public policies during the COVID-19 pandemic years, as there was no significant change in the manner or the strategy the classes were taught. Whatever the reason

for this decrease in the perception of the teaching activities, it can be seen in Table 12 that there was a significant decrease in the number of approved students in the CU for the BSc and MSc courses.

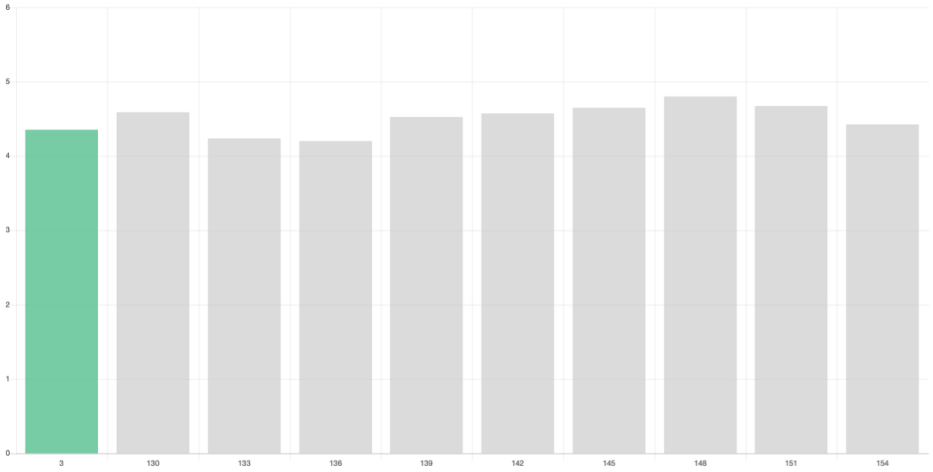

Figure 13 - Summary of the student's responses for the pedagogic inquiry 2021/2022.

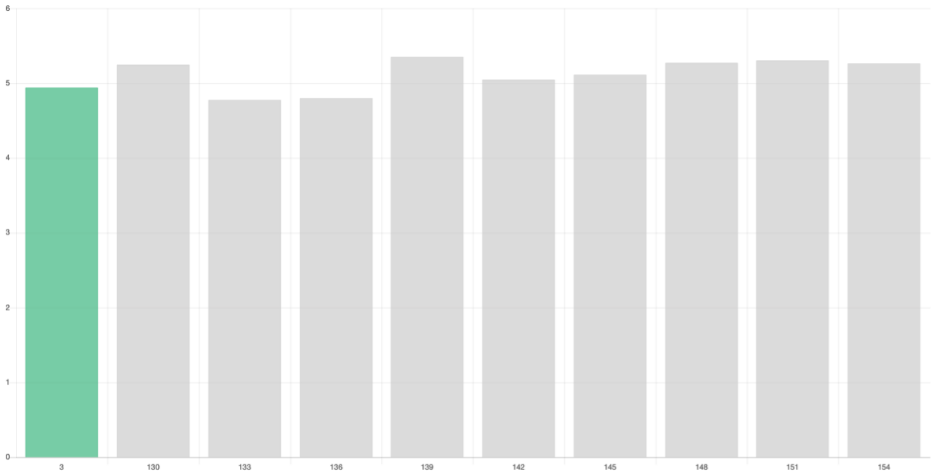

Figure 14 - Summary of the student's responses for the pedagogic inquiry 2020/2021.

Regarding previous years, for 2010/2011, 2011/2012 and 2012/2013 this questionnaire had 10 statements with which the student could agree or not. In 2013/2014 the questionnaire had only 6 statements that can be mapped to statements 1, 2, 6, 7, 8 and 9 of the previous years. These questionnaires had 4 possible replies: 'totally disagree', 'disagree', 'agree' and 'totally agree'. The original Portuguese statements and their translation to English are shown in Table 22, detailed in ANNEX D – Questions on the students' inquiries regarding quality assessment of classes. Since 2014/2015, a new set of 10 statements is used and the assessment grid has now 7 options, from 1 meaning 'totally disagree', to 7 meaning 'totally agree'. The new set of statements is shown in Table 23, also detailed in in ANNEX D – Questions on the students' inquiries regarding quality assessment of classes.

The University's *Regulamento de Avaliação Docente (RAD)* (Teachers Assessment Regulation) foresees two thresholds, the first one when responses are at least 80% positive (sum of the 'agree' and 'totally agree' replies) and the second one when positive responses are between 50% (inclusive) and 80%

(exclusive). For 2014/2015 questionnaires and onwards, RAD assumes that totally positive replies correspond to replies ranging from 5 to 7 in the initial 1 to 7 scale.

Students reply to these questions as a mean to evaluate the pedagogic performance of the teaching team. Up until 2016/2017, the responses were optional, but since 2017/2018 students are required to reply to the questionnaires.

Table 8 and Table 9 show the ratios of responses for of all replies for the curricular units taught from 2010/2011 until 2013/2014 and from 2014/2015 to 2015/2016, respectively. It can be seen that except for the case of the statement 7 for the year 2012/2013 (72.73%) all the replies are over the 80% threshold.

Table 8 – Ratios of positive replies to quality assessment questionnaires, 2010/2011 to 2013/2014.

Question (English)	Ratio of "totally agree" + "agree" responses over total replies			
	2010/2011	**2011/2012**	**2012/2013**	**2013/2014**
1. The teacher respects the class schedule	98,04%	100,00%	100,00%	100,00%
2. The teacher is available to talk to / support students in the defined office hours	98,00%	100,00%	100,00%	100,00%
3. The teacher addresses clearly the course subjects	92,16%	87,50%	90,91%	n/a
4. The teacher gives the course subjects the adequate amount of time to allow its comprehension	92,00%	87,50%	100,00%	n/a
5. In his/her explanations, the teacher keeps in mind the level of knowledge of the students	94,12%	93,75%	100,00%	n/a
6. Classes are well prepared and organized	86,27%	87,50%	*72,73%*	100,00%
7. The teacher stimulates student's participation and critical thinking	94,12%	93,33%	100,00%	100,00%
8. The teacher establishes a relation of respect with the students	98,04%	100,00%	100,00%	100,00%
9. The teacher analyses the results of the evaluation with the students and clears existing doubts	97,92%	100,00%	100,00%	n/a
10. In general, I am happy with this teacher's classes	98,04%	93,75%	90,91%	100,00%

Table 9 shows additional data. It can be seen in the second line of this table that only for the last three rows, the number of responses from students is meaningful, as for the first columns, only some students took the time to respond to the inquiries. Therefore, the presented ratios are weighted with the number of responses, as for each line, the displayed value corresponds to the average of responses of the different taught curricular units. Also, not all years are complete. At the date of writing this document, data for the second semester of the 2017/2018 was not available.

Regarding a critical assessment of the values for the last three years shown in the table, it can be seen that the smaller value (69,66s%) corresponds to the response to the questions 2 and 3, for the 2017/2018 year. The values have increased since and for 2019/2020, the smaller value of positive responses is 87.61%, for question 4 (respect for class schedule).

Table 10 and Table 11 show the results grouped by scientific area regarding the classes taught at the BSc and MSc levels, showing the weighted average of responses regarding number of responses, for each question number per year, the first for the curricular units in the area of the Computer Networks, and the second for the curricular units in the area of Programming. The questions are detailed in ANNEX D – Questions on the students' inquiries regarding quality assessment of classes.

Drawing trends and conclusions from these tables is not done without risk for two main reasons, the first being that only the three last years contain relevant data, and the second one being that the number of curricular units and its diversity do not contribute to the homogeneous interpretation of the data. Nevertheless, this does not mean that some recommendations cannot be derived, and in fact these are presented in Chapter 5, Conclusions.

As to the approval rates, Table 12 shows the ratios of approved / enrolled and approved / evaluated for the curricular units taught at UBI since 2010. The difference between these two ratios is that not all students that enrol are evaluated. As Table 12 shows, the smallest approval ratio for approved / enrolled is 67.5%, for the Project curricular unit. The students who did not approve at this curricular unit were never subjected to evaluation although they were formally admitted to exam, due to the characteristics of this curricular unit. The smallest approval approved / evaluated ratio is 71.43% for the curricular unit Topics on Processing Biosignals, a Computer Science and Engineering PhD course curricular unit. In this case, from the seven enrolled students, two failed to deliver the final assessment, and therefore were not approved.

In Table 12 the first column contains the year of the course, the second column contains the abbreviation of the curricular units taught, the third column contains the abbreviation of the names of the courses the curricular unit belongs to, and the fourth and fifth columns contain the ratios for number of approved students over number of enrolled students and number of approved students over number of evaluated students. The abbreviations and initialisms are included in the respective sections at the beginning of this document. Considering the sum of all enrolled, evaluated and approved students, the average is 86,79% and 93.03% for the approved / enrolled and approved / evaluated ratios, respectively.

Table 9 – Ratios of positive replies to quality assessment questionnaires, 2014/2015 to 2019/2020.

Question (English)	**Ratio of fully positive responses over total responses**					
Ratio of received responses over enrolled students	*4,76%*	*8,39%*	*23,91%*	*91,23%*	*88,39%*	*78,00%*
	2014/ 2015	**2015/ 2016***	**2016/ 2017**	**2017/ 2018**	**2018/ 2019**	**2019/ 2020**
1. Establishment of the working and assessment rules of the curricular unit at the beginning of the year	90,91%	100,00%	92,73%	72,86%	89,90%	88,59%
2. Organization and structure of the contents and activities of the curricular unit	81,82%	100,00%	88,18%	69,66%	81,82%	88,04%
3. Clarity while discussing the curricular unit syllabus	90,91%	92,38%	94,55%	69,66%	81,82%	87,87%

Question (English)	Ratio of fully positive responses over total responses					
4. Respect of the class schedule	81,82%	100,00%	90,91%	73,50%	84,85%	87,61%
5. Promotion of the critical thinking of the students	81,82%	92,38%	90,91%	72,86%	79,80%	88,18%
6. Availability to receive students in office hours	81,82%	100,00%	94,55%	73,50%	84,85%	88,32%
7. Use of information and communication technologies (web pages, Moodle, e-learning, *etc*.)	90,91%	100,00%	92,73%	70,51%	86,87%	91,23%
8. Respect for students	100,00%	100,00%	94,55%	72,01%	85,86%	90,76%
9. Abiding the working and assessment rules agreed with the students	90,91%	100,00%	90,91%	70,09%	82,83%	91,23%
10. Overall assessment of the performance of the teacher	100,00%	100,00%	94,55%	72,72%	82,83%	87,73%

Table 10 – Ratios of positive replies to quality assessment questionnaires, 2014/2015 to 2019/2020, for the curricular units of the Computer Networks scientific area (columns: number of the question, lines: year).

	1	2	3	4	5	6	7	8	9	10
2014/2015	90,9%	81,8%	90,9%	81,8%	81,8%	81,8%	90,9%	100,0%	90,9%	100,0%
2015/2016	100,0%	100,0%	89,0%	100,0%	89,0%	100,0%	100,0%	100,0%	100,0%	100,0%
2016/2017	93,3%	87,8%	95,6%	91,1%	91,1%	93,3%	93,3%	95,6%	91,1%	95,6%
2017/2018	72,3%	69,1%	68,1%	74,5%	72,3%	71,3%	75,5%	73,4%	72,3%	70,2%
2018/2019	90,3%	82,3%	82,3%	83,9%	80,6%	85,5%	85,5%	83,9%	83,9%	80,6%
2019/2020	83,5%	80,3%	81,0%	82,9%	82,9%	85,4%	86,6%	87,0%	87,8%	80,7%

Table 11 – Ratios of positive replies to quality assessment questionnaires, 2014/2015 to 2019/2020, for the curricular units of the Programming scientific area (columns: number of the question, lines: year).

	1	2	3	4	5	6	7	8	9	10
2015/2016	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
2016/2017	90,0%	90,0%	90,0%	90,0%	90,0%	100,0%	90,0%	90,0%	90,0%	90,0%
2017/2018	75,3%	71,8%	73,6%	73,6%	75,3%	78,7%	63,8%	69,5%	66,1%	78,4%
2018/2019	88,2%	79,4%	79,4%	85,3%	76,5%	82,4%	88,2%	88,2%	79,4%	85,3%
2019/2020	83,9%	83,9%	80,7%	83,9%	83,9%	77,4%	83,9%	87,1%	83,9%	80,7%

Table 12 – Approved over Enrolled (App/Enr) and Approved over Evaluated (App/Eval) approval ratios, UBI.

Year	CU	Course name	App / Enr	App / Eval
2010/2011	ASI	MEI	100,00%	100,00%
	RSI	EI	76,27%	76,27%
	TRI	TSI	85,71%	97,30%
2011/2012	AS	TSI	85,00%	100,00%
	SD	EI	83,72%	87,80%
	TI	TSI+EI	74,73%	76,40%

Year	CU	Course name	App / Enr	App / Eval
	TRI	TSI	84,21%	88,89%
2012/2013	ASI	MEI	96,77%	100,00%
	RSI	EI	78,72%	84,09%
	TI	TSI+EI	72,53%	91,67%
2013/2014	AdmS	TSI	92,31%	100,00%
	InfMed	BioEng	100,00%	100,00%
	RedTel	TIC4TELCO	100,00%	100,00%
	RSI	EI	81,03%	92,16%
	TRI	TSI	70,00%	100,00%
2014/2015	AVA	PhD EI	77,78%	77,78%
	Proj	EI	67,50%	75,00%
	RC	EI	81,67%	87,50%
	RedTel	TIC4TELCO	100,00%	100,00%
	RSI	IW	76,19%	88,89%
	TCD	MEI	100,00%	100,00%
	TPB	PhD EI	71,43%	71,43%
	TRI	TSI	100,00%	100,00%
2015/2016	AVA	PhD EI	100,00%	100,00%
	Prog	CieBio+BioEng	100,00%	99,25%
	RC	EI	87,71%	90,57%
	TPB	PhD EI	100,00%	100,00%
2016/2017	ASB	MBE	100.00%	100,00%
	AVA	PhD EI	100,00%	100,00%
	CMS	BioEng	83,33%	83,33%
	ER	MEI	97,30%	97,30%
	Programação	CieBio+BioEng	96,83%	95,08%
	RC	EI	88,46%	88,46%
	RSI	IW	63,16%	75,00%
	TPB	PhD EI	100,00%	100,00%
2017/2018	ASB	MBE	100.00%	100,00%
	ASR	MEI	93,10%	100,00%
	AVA	PhD EI	100.00%	100,00%
	Programação	CieBio+BioEng	100,00%	95,08%
	RC	EI	88,33%	89,04%
	RSI	IW	61,36%	84,38%
	TPB	PhD EI	100.00%	100,00%

Year	CU	Course name	App / Enr	App / Eval
2018/2019	AVA	PhD EI	50,00%	100,00%
	CC	MEI	92,31%	92,31%
	Comp. & Progr.	CieBio	97,14%	97,14%
	RC	EI	85,29%	85,29%
	RSI	IW	83,87%	83,87%
	TPB	PhD EI	100,00%	100,00%
2019/2020	AVA	PhD EI	100,00%	100,00%
	ASR	MEI	96,00%	96,00%
	Comp. & Progr.	CieBio	97,56%	97,56%
	RC	EI	85,56%	85,56%
	RSI	IW	57.14%	57.14%
	TPB	PhD EI	50,00%	100,00%
2020/2021	AVA	PhD EI	100,00%	100,00%
	ASR	EI	88,17%	91,11%
	Comp. & Progr.	CieBio	89,80%	89,80%
	RC	EI	65,38%	70,00%
	RSI	IW	65,38%	65,38%
	TPB	PhD EI	100,00%	100,00%
	Prot. Com.	MEI	77,78%	96,55%
2021/2022	AVA	PhD EI	100,00%	100,00%
	ASR	EI	65,96%	70,45%
	Comp. & Progr.	CieBio	93,88%	97,87%
	RC	EI	42,59%	57,50%
	RSI	IW	50,00%	72,41%
	TPB	PhD EI	100,00%	100,00%

Following the recommendations for **Open Science** defined by the European Commission (Goals of research and innovation policy, European Commission, 2016), and also in the goals defined by the Portuguese Government in its 2016 document intitled "*Ciência Aberta, Conhecimento para todos, Princípios para todos*" (Ministry of Science, Technology and Higher Education of Portugal, February 2016), the most recent research papers have been submitted to magazines and journals that offer Open Access. Moreover, this is a specific requirement for the European projects that fund the research on which these papers were written.

For this reason, and because these papers / books / book chapters often are the outputs / deliverables of different projects funded directly or indirectly by the European Union and / or by the Portuguese Government, the quality of these magazines / journals / editors is closely monitored and the author has only published in reputed and indexed publications, as it can be observed in the following sections.

2.2 Part A- 2) Pedagogic Activities

Production of teaching materials

The Computer Science department at UBI provides a webserver for professors to host their professional websites. UBI also provides a Moodle platform to host and manage classes, nevertheless, the contents published in Moodle are not available to students that are not registered at UBI, making it unsuitable to use with ERASMUS students who sometimes face administrative registration problems, while also creating difficulties to further disseminate the teaching materials. For these reasons, a choice was made to host the teaching documents at https://webpages.ciencias.ulisboa.pt/~nmgarcia. Figure 15 shows a snapshot of the main page, with links to personal data, to class materials and old class materials, to projects regarding current research, to ideas for future research, links to the ALLab and BSAFE-Lab laboratories, and to the Cisco Academy website. It also includes two links for student registration and for students to register class attendance. The two last anchors are reserved for future use.

Figure 16 shows a snapshot of the page http://www.di.ubi.pt/~ngarcia/classes.html, showing the links for two curricular units. In this figure, the curricular unit of Introduction to Medicine – Medical Informatics is chaired by Miguel Castelo Branco and managed by resources at the Faculty of Health Sciences – UBI, therefore, the submission and grade links are hosted by Moodle hosted by the Faculty of Health Sciences.

As shown in Figure 15, there are links to current classes and to classes from previous years. At the start page (Figure 15), a link to facilitate the schedule of meetings with students is also provided. For each curricular unit page, several links and contents are stored, including:

a) Link to an online form to record student registration data;
b) Link to an online form to record the student attendance at a particular class;
c) Files with theoretical notes;
d) Files with practical laboratory exercises;
e) Files with practical exercises solution sheets;
f) Files with frequency tests and/or exams with solutions;
g) An online spreadsheet with current grades for students;
h) An online spreadsheet to allow the scheduling of defences of practical assessments;
i) Files with live recordings of classes.

To ensure that the students attend the minimum number of classes as defined in the curricular unit's assessment criteria, the recording of a student's attendance to any particular class is made by means of an online form. At the end of each class, the professor announces a unique "class word", that the student must use afterwards as proof of his/her attendance in the classroom. This method is not infallible, but neither are the classical paper attendance sheets that need to be signed. The data is collected in real time from the online class attendance spreadsheet (accessible via Google Forms) and registered in the class grades online spreadsheet.

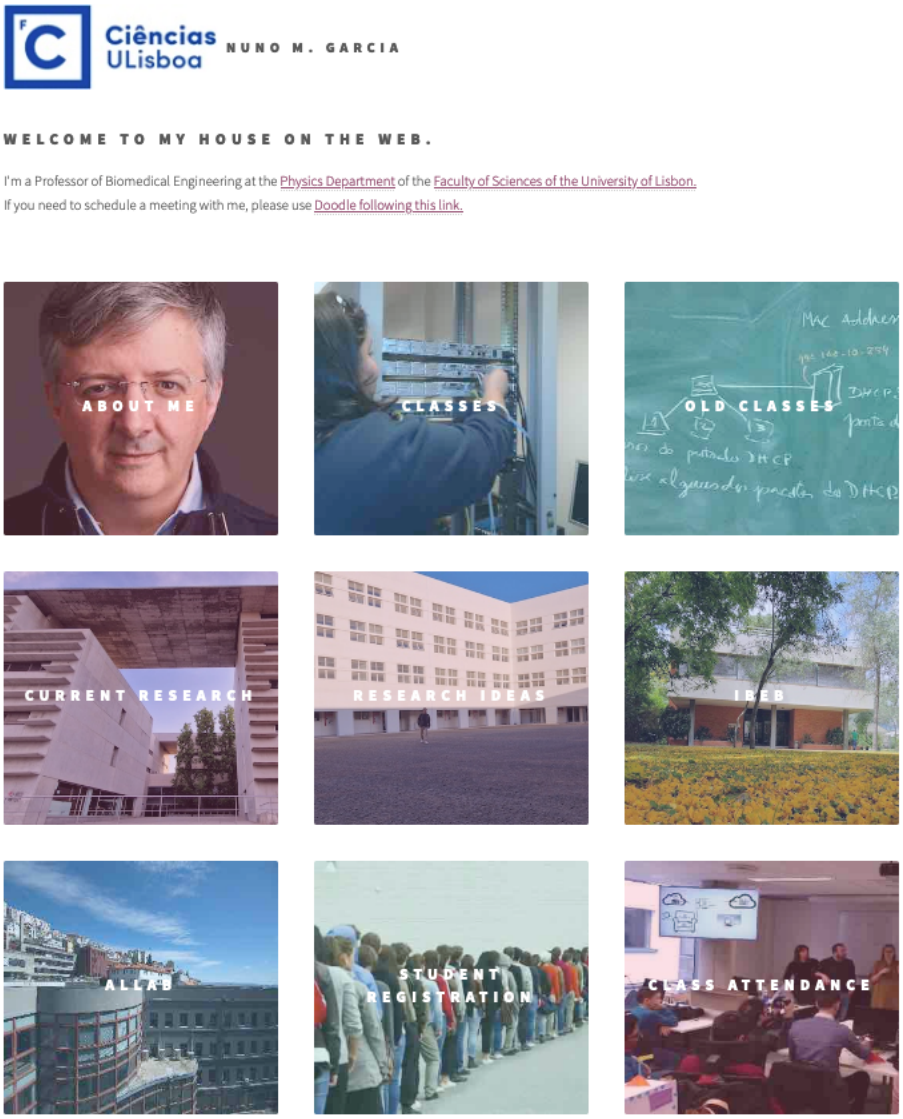

Figure 15 – Nuno Garcia's website.

The recordings of some theoretical classes can be found at the author's YouTube channel, following this link: https://youtu.be/qCvY7PNdOr4. The recording of some practical classes can be found at this YouTube channel: https://www.youtube.com/watch?v=wNHOFUi8jSc&feature=youtu.be.

As support of the coordinated curricular units, and following the before mentioned procedures, he has produced documentation to support presential and remote classes as shown in Table 13. The first column described the name of the curricular unit; the second column describes the last published year; the third column describes the items that were produced and are available in the curricular unit's web page. Except when noted, these contents are hosted at the Computer Science Department at UBI, accessible at the web address http://www.di.ubi.pt/~ngarcia/classes.html. Materials for the curricular units from the 2nd semester of 2022/2023 and onwards are available at the Moodle repository of FCUL. To access these contents, an authorized login is required, but the materials can be made available on request.

Figure 16 – Nuno Garcia's website showing the links to access the resources of two curricular units: Computer Networks and Internet Services, and Introduction to Medicine – Medical Informatics.

Table 13 – Produced teaching materials for the coordinated curricular units.

Curricular unit	Last published year	Produced materials								
		a	b	c	d	e	f	g	h	i
Administration of Networked Systems	2021/2022	✔	✔	✔	✔		✔	✔	✔	
Computer Networks	2021/2022	✔	✔	✔	✔	✔	✔	✔	✔	✔
Computers and Programming	2021/2022	✔	✔	✔	✔	✔	✔	✔	✔	
Cloud Computing	2018/2019	✔	✔	✔	✔	✔	✔	✔	✔	
Networks and Internet Services	2021/2022	✔	✔	✔	✔		✔	✔		✔
Ubiquitous Computing	2018/2019			✔						
Implementation (*)	2016/2017	✔	✔	✔	✔	✔	✔	✔	✔	✔
Safety Issues and Regulations (*)	2016/2017	✔	✔	✔	✔	✔	✔	✔	✔	✔
Advanced Topics in Computer Science	2015/2016			✔						
Cloud and Data Center Technologies	2014/2015	✔	✔	✔		✔	✔			
Computer Networks Technologies	2014/2015	✔	✔	✔	✔		✔	✔		
Telecommunications Networks	2014/2015	✔	✔	✔	✔		✔	✔		

Curricular unit	Last published year	Produced materials								
		a	b	c	d	e	f	g	h	i
System Administration	2013/2014	✔	✔	✔	✔		✔	✔		
Analysis of Information Systems	2012/2013	✔		✔	✔					
Internet Technologies	2012/2013	✔	✔	✔	✔	✔	✔	✔		
Databases	2009/2010			✔						

(*) published at the Blackboard platform hosted by the University of Zuid, Netherlands.

Evaluation of the BSc course in Computer Science and Engineering from A3ES

In the 2012/2013 school year, the Portuguese agency for accreditation, A3ES, started the accreditation process for the undergraduate course of Computer Science and Engineering. As Course Director, he coordinated the process of compilation, insertion and validation of the information of the Computer Science and Engineering BSc course. He also attended the presential meetings with the A3ES Accreditation Committee during their visit to UBI. As a result, the Computer Science and Engineering course was accredited for the maximum period of 5 years.

2.3 Part A- 3) Innovating and adding value to teaching activities

Proposed new or reformulated curricular units or short courses

He has defined or coordinated the team that defined the syllabus of the following curricular units (or courses):

16 New curricular unit on *Computação Responsável* (Responsible computing), 2nd curricular year of the new course on Creative Computing and Virtual Reality, 2022;

15 Reformulated curricular unit on *Laboratórios de Informática*, 1st curricular year of the new course on Artificial Intelligence and Data Science, 2022;

14 Reformulated curricular unit on *Computadores & Programação* (Computers and Programming), 2nd curricular year of the Bachelor of Science course in Bioengineering, curricular unit coordinator, 2018;

13 New curricular unit on *Dispositivos médicos e interoperabilidade* (Medical devices and interoperability), 1st curricular year of the Post-Graduation Course in Tele-Health, UBI, 2016;

12 New curricular unit on eHealth 3.0, 1st curricular year of the Post-Graduation Course in Tele-Health, UBI, 2016;

11 New course on Research Methods in Human-Computer Interaction, Training School, managed by Tallinn University, Tallinn, Estonia, held in Dubrovnik, Croatia, the 11-15 July 2016, 2016;

10 New course on AAL, AAPELE Training School, managed by *Université Toulouse 3 Paul Sabatier*, Castres, France, held in Castres, France, 29 June-1 July 2015;

9 New curricular unit on Implementation, 2nd curricular year of the Master of Science in Care and Assistive Technology course, joint degree from the universities of Fontys (Nederland), Zuyd (Nederland), Saxion (Nederland), Satakunta (Finland), Tampere (Finland), and UBI (Portugal), curricular unit coordinator, 2015;

8 Reformulated curricular unit on *Programação* (Programming), 2nd curricular year of the Bachelor of Science course in Bioengineering, and also 2nd curricular year of the Bachelor of Science course in Biomedical Sciences, UBI, curricular unit coordinator, 2015;

7 New curricular unit on Safety Issues and Regulations, 2nd curricular year of the Master of Science in Care and Assistive Technology course, joint degree from the universities of Fontys (Nederland), Zuyd (Nederland), Saxion (Nederland), Satakunta (Finland), Tampere (Finland), and UBI (Portugal), curricular unit team leader, 2015;

6 New short course on *Introdução à Programação em Python* (Introduction to programming in Python), Summer Course, UBI, 2015;

5 New curricular unit on *Ambientes de Vida Assistida* (Ambient Assisted Living), 1st curricular year of the Doctor of Philosophy in Computer Science and Engineering course, UBI, curricular unit coordinator, 2014;

4 New curricular unit on *Tópicos de Processamento em Biosinais* (Topics on Biosignals Processing), 1st curricular year of the Doctor of Philosophy in Computer Science and Engineering course, UBI, curricular unit coordinator, 2014;

3 New curricular unit on *Redes de Computadores* (Computer Networks), 2nd curricular year of the Bachelor of Science course in Computer Science and Engineering course, UBI, curricular unit coordinator, 2013;

2 New curricular unit on *Programação para dispositivos móveis* (Programming for mobile devices), Web Informatics BSc course, UBI, 2013;

1 New curricular unit on *Tecnologias de Cloud e Data Center* (Cloud Computing and Data Center Technologies), 1st curricular year of the Master of Science course in Computer Science and Engineering course, University of Beira Interior, curricular unit coordinator, 2012.

Creation of new teaching laboratories

Cisco Academy classrooms

After the creation of the Cisco Academy at UBI, it was important to create a laboratory to support the classes for the Cisco Networking academy curricula. As the starting budget for the Cisco Academy was null, in 2012 and in 2013, he celebrated agreements with AFTEBI and with the company LIDL S.A. in order to receive equipment that was donated to the university and now is installed in the two Cisco

Academy classrooms at CFIUTE, UBI. In total, the Cisco Academy classrooms have installed the following equipment:

- 6 IBM servers including model X342, X346, X346 and 8671-7AX
- 6 CISCO Routers 2501
- 12 CISCO Switches including models WS-CZ950G-Z9-EZ, WS-C3548-XL-EM, Catalyst 2900 XL, Catalyst Express 500 and 3500.

The two Cisco Academy classrooms located at CFIUTE now support the activities of the Cisco Academy, but also serve as teaching laboratories to other courses taught in the Computer Science Department, *e.g.* the course TIC4TELCO, and in CFIUTE.

Additional network equipment has been installed in the Networks Laboratory (room 6.27) in the building of the Computer Science Department, UBI. Here the laboratory has received the following equipment:

- 9 Cisco Routers 1941
- 9 Cisco Switches Catalyst 2960 Plus
- 2 Cisco ASA 5505.

Overall, the investment made in these three rooms is estimated to be of in excess of 50.000€, funded with the Cisco Academy generated funds and with donations from companies.

Assisted Living Computing and Telecommunication Laboratory

As of the creation of the ALLab, it was necessary to equip the laboratory with the equipment to pursue its research goals. The initial equipment was purchased with the support of the *Instituto de Telecomunicações* though the project CIFANG. Additional equipment was purchased with internal projects funding and with funding from international and national projects such as TICE.Healthy or UBI-BioSignals. The equipment is currently installed in room 6.9 of the Pole 6 building of UBI and includes the following:

- Biosignal acquisition devices: 3 BioPlux devices (two devices with 8 channels, one device with 4 channels), 12 BITalino devices
- Printers: 1 Ultimaker 3D printer, 1 ink-jet printer with scanner, 1 laser printer
- Computers: 12 laptop computers, 3 servers
- Other support equipment: 1 data show, 1 soldering station, 3 multimeters, and 2 UPS.

Overall the funds invested in equipment for ALLab are estimated to be in excess of 25.000€.

Proposed new courses

He was member of the team that created the following courses:

5 "*Aplicações IoT para a área da saúde* (IoT applications for health)", a summer school funded by the FCT with 14.840€ under the initiative *Verão com Ciência*, coordinated by Dr. Ivan Pires, Instituto de Telecomunicações and Instituto Politécnico de Viseu, July 2020;

4 *Telemonitorização da Doença Crónica*, a Post-graduate course organized with the SITT – *Sociedade Ibérica de Telemedicina e Telesaúde* and LINDE Saúde S.A., 2019, https://www.jornalmedico.pt/atualidade/37429-universidade-da-beira-interior-e-linde-saude-lancam-curso-de-telemonitorizacao-da-doenca-cronica.html);

3 Care and Technology, a MSc course deployed in 2016/2017 by the universities of Fontys (Nederland), Zuyd (Nederland), Saxion (Nederland), Satakunta (Finland), Tampere (Finland), and UBI (Portugal). He was member of the team that created the course curriculum, where the classes are taught in a mixed online and presential manner, as the students get to spend one campus week in all the universities that are part of the MSc consortium; the Master in Care and Technology was approved by the Dutch higher education authority. http://www.master-ct.eu/;

2 *Tele-Saúde* (Tele-health), a post-graduate course to be deployed by the University of Limoges, France, and UBI. The course was approved by the French higher education authority. https://www.ubi.pt/curso/1011;

1 *Informática Web* (Web Informatics), a BSc course started in 2014 at UBI. He was part of the team that created the proposal for the curriculum of the course. https://www.ubi.pt/curso/969.

Public Database

As support to the research activities at ALLab, the collected data in experiments is anonymized, annotated and published in the ALLab public repository. This is done as a contribute to foster additional research but also to allow the replication of the research carried out at ALLab. The UBI-Biosignals database was published in 2014, but includes data from the first experiments in 2010. The published files contain data for accelerometry, electrocardiography, electromyography, and electrodermal activity collected in humans, among others. The UBI-Biosignal database is referenced in the papers that disclose the research that originated the data. The files can be found in a wiki-like structure hosted at https://allab.di.ubi.pt/mediawiki/index.php/Main_Page .

Activity as invited speaker in pedagogic events

He has been invited as speaker or to give a keynote talk at the following pedagogic and/or dissemination events:

20 Internet Governance Forum, coordinator of the closing panel, members of the panel: Manuel da Costa Cabral, ANACOM, Ana Neves, FCT, Fernanda Santos, DECO, Marta Moreira Dias, .PT, Everton Rodrigues, NIC.br, Pedro Mendonça, CNCS, 3 November 2022, Lisbon, Portugal;

19 Internet Governance Forum, coordinator of the main panel; members of the panel: Ana Neves, FCT, André Barata, UBI, Helena Martins, Google, Karel Novotný, APC - Association for Progressive Communications, Ricardo Lafuente, *Associação D3 – Defesa dos Direitos Digitais* , November 2019, Covilhã, Portugal;

18 Speaker, Portugal eHealth Summit, 19-20 March 2019, Lisbon, Portugal;

17 Speaker for the activities on the Day for a Secure Internet, at the *Estabelecimento Prisional da Covilhã,* Covilhã, Portugal;

16 Internet Governance Forum, coordinator of the main panel; members of the panel: Elsa Costa e Silva, Universidade do Minho, João Romão, GetSocial.io, WEF Global Shaper, Sandra Hoferichter, EuroDIG, Vania Baldi, Universidade de Aveiro, Yuliya Morenets, TaC – Together Against Cybercrime, Leader of the Youth IGF Movement, November 2018, Aveiro, Portugal;

15 Speaker, "Medical Apps – Medicine 4.0," 28 April 2018, Covilhã, Portugal;

14 Speaker, Portugal eHealth Summit, 21-23 March 2018, Lisbon, Portugal;

13 Moderator, "*Simpósio: da UBI para o Mundo*," Faculty of Engineering, UBI, 12 March 2018, Covilhã, Portugal;

12 My COST experiences, Fundação para a Ciência e Tecnologia, University of Aveiro, 4 March 2015, Aveiro, Portugal;

11 E-Recruitment - *Plataformas digitais de apoio ao emprego* (E-Recruitment-digital platforms for employment support), communication, Pombo N., Garcia N., 15 May 2014, seminar invited talk, 2ª Feira do Emprego e do Empreendedorismo, Instituto Politécnico de Castelo Branco (Polytechnic Institute of Castelo Branco) (IPCB-ESGIN), Idanha-a-Nova;

10 *Profissões com Futuro-investigação no ALLab e EyeSeeLab* (Professions with Future-research at ALLab and EyeSeeLab), communication, Pombo N., Garcia N., 16 May 2014, seminar invited talk, Feira de Ensino, Empreendedorismo, Emprego e Juventude, 16 May 2014, Celorico da Beira, Portugal;

9 *Segurança na Internet* (Security in the Internet), communication, Tiago Simões, Alexandre Pinheiro, Nuno M. Garcia, Internet Safety Week, Escola Secundária Campos Melo (ESCM), February 2012, Covilhã, Portugal;

8 Wearable wireless device for interface control, poster, Nuno M. Garcia, Rafael Couto, Alexandre Pinheiro, 27 September 2011, Health Innovation & Technology Transfer Showcase, University of Minho, Braga, Portugal (available at http://allab.it.ubi.pt/images/documents/A2_Wearable_wireless_device_for_interface_control_EN.pdf);

7 *Sistema de interacção Mista Web+SMS para monitorização e treino de estilos de vida* (Mixed Web+SMS interaction system for monitoring and training of life styles), poster, Nuno M. Garcia, Rafael Couto, Alexandre Pinheiro, Francisco Viana, 27 September 2011, Health Innovation & Technology Transfer Showcase, University of Minho, Braga, Portugal (available at http://allab.it.ubi.pt/images/documents/A2_Sistema_de_Interac%C3%A7%C3%A3o_Mista_Web_SMS_para_Monitoriza%C3%A7%C3%A3o_Treino_Estilos_Vida_PT.pdf);

6 *Estimação de gasto energético durante actividade física* (Estimation of energy expenditure during physical activity), poster, Virginie Felizardo, Pedro Diniz Gaspar, Nuno M. Garcia, 27 September 2011, Health Innovation & Technology Transfer Showcase, University of Minho, Braga, Portugal (available at http://allab.it.ubi.pt/images/documents/A2_Estimacao_do_gasto_energetico_durante_actividade_fisica.pdf);

5 *Auto-semelhança de ECG no diagnóstico de patologias cardíacas* (ECG self-similarity in the diagnostic of cardiac pathologies), poster, Paula Sousa, Nuno M. Garcia, Miguel Castelo Branco, 27 September 2011, Health Innovation & Technology Transfer Showcase, University of Minho, Braga, Portugal (available at http://allab.it.ubi.pt/images/documents/A2_Auto_semelhan%C3%A7a_de_ECG_ no_diagn%C3%B3stico_de_patologias_cardiacas.pdf);

4 *Investigação em Ambientes Assistidos* (Research on Ambient Assisted Living), communication to high school students, José Silvestre Ribeiro Secondary School, Idanha-a-Nova, 28 February 2011;

3 The 1024 tricks to be a Computer Science Engineer, communication, Nuno M. Garcia, 9 March 2010, Faculty of Engineering, Department of Computer Science, UBI, Covilhã, Portugal (available from http://allab.it.ubi.pt/ download.php?d= os1024truques.pdf);

2 *A Internet do Futuro* (The Internet of the Future), communication, Nuno M. Garcia, 24 June 2009, Centro de Formação Militar e Técnica da Força Aérea Portuguesa, Base Aérea da Ota, Ota, Portugal;

1 *Segurança na Internet: coisas a fazer e coisas a evitar hoje e no futuro* (Security in Internet: things to do and things to avoid today and in the future), Safe Internet Day, communication, Nuno M. Garcia, 10 February 2009, Escola Secundária Frei Heitor Pinto, Covilhã, Portugal.

Participation in pedagogic projects in other institutions

As mentioned previously, he has been invited to lecture classes or isolated courses in several national and foreign universities. Among these, stand the following:

- Invited to teach the Planning and Network Management curricular unit, in Computer Science MSc course of at the *Universidade do Mindelo,* Cape Verde (January 2020);
- Member of the Training Centre for "*ARCTEL - Associação de Reguladores de Comunicações e Telecomunicações da Comunidade dos Países de Língua Portuguesa*" (2017-);
- Invited Associated Professor (in accumulation and with permission from the Rector of UBI) at ULHT (2012 to 2019);
- Consultant in New Technologies for the *Agrupamento de Escolas Escalada*, Pampilhosa da Serra, Portugal (2016-2018);
- Consultant in Information and Communications Technologies for the *Agrupamento de Escolas do Fundão*, Fundão, Portugal (2015, 2016, 2017);
- Lecturer at the Summer School organized by the University of Tallinn, Tallinn, Estonia, held in Dubrovnik, Croatia (2016);

- Invited Associate Professor at the Addis Ababa University (AAU), Addis Ababa, Ethiopia (2011, 2012, 2015, 2018);
- Invited Associate Professor at the *Universiti Teknologi Malaysia*, Johor Bahru and Kuala Lumpur, Malaysia (2015);
- Lecturer at the Polytechnic Institute of Guarda, Guarda, Portugal (2008, 2012, 2013, 2018);
- Member of the Pedagogical and Scientific Councils of ECATI, ULHT (2011, 2012);
- Member of the General Council for the *Escola Secundária Frei Heitor Pinto*, Covilhã, Portugal (2011, 2012);
- Member of the Pedagogical Council of ULHT (2009).

2.4 Part A- 4) Advisory and supervision

Supervision of Post-Doctoral Researchers

He is the supervisor for the following Doctors of Philosophy:

4 Mehran Pourvahab, Ph.D. em Computer Engineering - Software Systems da Islamic Azad University, on the research for Project PHArA-ON on Predictive Algorithms for Health and Well-Being, from October 2022 to October 2024;

3 Abdelali Hadir, PhD in Computer Science and Engineering, King Hassan II University (Morroco), on the research intitled "Passing Cloud," on the identification, monitoring and prevision of relevant events experienced by vehicles while moving, using off-the-shelf devices. Post-Doctoral Scholarship awarded by the Centre for Competences in Cloud Computing (C4) from January 2021 to April 2022;

2 Ivan Miguel Serrano Pires, PhD in Computer Science and Engineering (European PhD degree), UBI, on the research intitled "Passing Cloud," on the identification, monitoring and prevision of relevant events experienced by vehicles while moving, using off-the-shelf devices. Post-Doctoral Scholarship awarded by the Centre for Competences in Cloud Computing (C4) from February 2019 to December 2020;

1 Sandeep Pirbhulal, PhD in Pattern Recognition and Intelligent Systems (2014.09-2018.01), Shenzhen Institutes of Advanced Technology, University of Chinese Academy of Sciences, Shenzhen, China, on the research intitled "Predictive Algorithms for Health," on the use of biosignals to support predictive algorithms for the some areas in the fields of cardiac disease, neurologic degenerative diseases and behavioural-related diseases. Post-Doctoral Scholarship awarded by the Centre for Competences in Cloud Computing (C4) from May 2019 to December 2020.

Advisory of Doctor of Philosophy students

He was advisor for the following Doctor of Philosophy degree students:

4 Virginie Felizardo, PhD student in Computer Science and Engineering, UBI, thesis title "Context-aware algorithms for Diabetes or Prediabetes prediction and diagnosis support in Ambient Assisted Living," co-adivsed by Dr. Imen Megdiche (*Université Paul Sabatier*, Toulouse, France), defended the 8 February 2023; members of the Jury – President: Professor Hugo Proença (UBI); Main Opponents: Dr. Pedro Brandão (University of Porto), Dr. Hugo Silva (Instituto de Telecomunicações), Opponents: Dr. Ana Aguiar (University of Porto), Dr. Nuno Pombo (UBI), Dr. Nuno Garcia (UBI); Final Grade: Approved by unanimity.

3 Melaku Girma, PhD Student in Computer Science Engineering, AAU, Ethiopia, thesis title "Enhancing Agile for Large Scale Projects," co-advised by Dr. Dida Midekso (AAU), December 2020.

2 Gonçalo Marques, PhD student in Computer Science and Engineering, UBI, thesis title "Internet of Things Architecture for Enhanced Living Environments," co-advised by Dr. Zdenka Babic (University of Banja Luka, Bosnia and Herzegovina), defended the 22 April 2020; members of the Jury – President: Professor Mário Raposo (UBI); Main Opponents: Dr. Jorge Sá Silva (University of Coimbra, Portugal), Dr. Pedro Brandão (University of Porto, Portugal), Opponents: Professor Marília Curado (University of Coimbra, Portugal), Dr. José Carlos Fonseca (IPG), Dr. Alexandre Fonte (IPCB), Dr. Nuno Pombo (UBI), Dr. Nuno Garcia (UBI); final grade Very Good (16/20).

1 Ivan Miguel Serrano Pires, PhD in Computer Science and Engineering (European PhD degree), UBI, thesis title "Multi-sensor Data Fusion in Mobile Devices for the Identification of Activities of Daily Living," co-advised by Dr. Francisco Flórez-Revuelta (University of Alicante, Spain), defended the 16 November 2018; members of the Jury – President: Professor Mário Freire (UBI), Main Opponents: Professor Ciprian Dobre (Polytechnic University of Bucharest, Romenia), Dr. Marília Curado (University of Coimbra, Portugal), Opponents: Dr. Miguel Coimbra (University of Porto, Portugal), Dr. Cristina Canavaro (Polytechnic Institute of Castelo Branco, Portugal), Dr. Nuno Pombo (UBI), Dr. Nuno Garcia (UBI); final grade: Excellent (18/20). Ivan was the recipient of the ***Prémio UBI Vitalmobile Telemedicina*** in 2020, for his PhD research.

He is the advisor for the following Doctor of Philosophy degree students:

10 Nasrin Tavakolizadeh, PhD Student in Computer Science and Engineering, UBI, temporary thesis title "Algorithms for analisys of inorganic signals", expected conclusion July 2026;

9 Hanna Denysyuk, PhD Student in Computer Science and Engineering, UBI, thesis title "Empowerment of patients with cardiopathies in the context of 5P Medicine", expected conclusion July 2025;

8 Sérgio Nunes, PhD Student in Computer Science and Engineering, UBI, thesis title "Exploratory research on analysis of seismic signals towards crustal deformation estimation", expected conclusion July 2025;

7 Hugo Veiga, PhD Student in Computer Science and Engineering, UBI, thesis title "Identification and prevention of attacks in VoIP networks," co-advised by Dr. Ivan Ganchev, University of Limerick, Ireland, expected conclusion in June 2024;

6 Sisay Yemata, PhD Student in Computer Science Engineering, University of Addis Ababa (AAU), Ethiopia, thesis title "A Requirements Engineering Artifact Model for Improving Security and Privacy Issues in Big Data Management Software Projects for Integrated IoT and Cloud Environments," co-advised by Dr. Dida Midekso (AAU), expected conclusion June 2023;

5 Henriques Zacarias, PhD student in Biomedicine, UBI, thesis title "A novel automatic predictive system for Atrial Fibrillation detection in Electrocardiograms," co-advised by Dr. João Alexandre Lobo Marques (University of São José, Macao), and Dr. Victor Hugo Albuquerque (University of Fortaleza, Brazil) expected conclusion in June 2023;

4 Berhanyihun Amanuel, PhD Student in Computer Science Engineering, University of Addis Ababa (AAU), Ethiopia, thesis title "A Framework for Cooperative Adaptive Mobile Systems" co-advised by Dr. Dida Midekso (AAU), expected conclusion June 2023;

3 Dmytro Vasyanovych, PhD student in Computer Science and Engineering, UBI, thesis title "Sensors and devices for the automatic identification of human emotions," co-advised by Dr. Maria da Graça Proença Esgalhado (UBI), expected conclusion in June 2023;

2 Seble Esseynew, PhD Student in Computer Science Engineering, University of Addis Ababa (AAU), Ethiopia, thesis title "Value Based Ethical Framework for Software Requirements Engineering," co-advised by Dr. Dida Midekso (AAU), expected conclusion June 2023;

1 Mesfin Workineh, PhD Student in Computer Science Engineering, University of Addis Ababa (AAU), Ethiopia, thesis title "Cloud Suitability Framework for Migrating Legacy Software System," co-advised by Dr. Dida Midekso (AAU), expected conclusion June 2023;

He is co-advisor for the following Doctor of Philosophy degree students:

2 António Júlio Padez, PhD student in Textile Engineering, UBI, advisor Dr. Madalena Rocha Pereira (UBI), title of the thesis "*Ergonomia e modelação de produtos funcionais de vestuário com* integração *de biosensors* (Ergonomy and modelling of functional clothing with the integration of biosensors)," expected conclusion in June 2024;

1 Filipa Craveiro, PhD student in Textile Engineering, UBI, former advisor Dr. José Lucas (expecting to be replaced by another supervisor) (UBI), title of the thesis "*Interpretação das cores pelos indivíduos/crianças daltónicas em catálogos virtuais de moda* (Interpretation of colours by daltonic adults and children in fashion virtual catalogues)," expected conclusion in June 2024.

Advisory of Master of Science students

He is currently the advisor for the following Master of Science degree students:

2 Bárbara Matos, MSc student in Computer Science and Engineering, UBI, dissertation title "Mobile platform for kUDP real time communication," expected conclusion June 2023;

1 Fábio Santos, MSc student in Computer Science and Engineering, UBI, dissertation title "Measurement of biosignals using Radar-on-a-Chip systems," co-advised by Dr. Nuno Pombo (UBI), expected conclusion November 2024.

He was the advisor for the following Master of Science degree students:

21 Fábio Machado, MSc student in Computer Science and Engineering, UBI, dissertation title "Assessment of the performance of a special User Datagram Protocol," November 2022;

20 João Vilelas, MSc student in Computer Science and Engineering, UBI, dissertation title "Algorithms for the assessment of tremors for diagnostic support of neuro-degenerative diseases," co-supervised by Prof. José Martinez (UBI), September 2021;

19 Daniel Barata Pereira, MSc student in Computer Science and Engineering, UBI, MSc internship report in Computer Science and Engineering, with the title "*Construção de um Chat-Bot de suporte a actividades empresariais* (Development of a Chat Bot to support company activities)," co-supervised by João José Teles Gouveia (ReadinessIT SA), UBI, 19 February 2021;

18 Igor Matias, MSc student in Computer Science and Engineering, UBI, dissertation title "ECG based Prediction Model for Cardiac-Related Diseases using Machine Learning Techniques," co-supervised by Prof. Miguel Castelo Branco (UBI), Prof. Eftim Zdravevski (Faculty of Computer Science and Engineering, University Ss. Cyril and Methodius, Skopje, Macedonia), June 2020;

17 Yoann Resende, MSc student in Computer Science and Engineering, UBI, dissertation title "Road Event Mapping Method for Mobile Devices with Cloud Computing based Technologies,"co-supervised by Dr. Susanna Spinsante (Università Politecnica delle Marche, Ancona, Italy), June 2020;

16 Richard Guise, MSc student in Computer Science and Engineering, UBI, dissertation title "Alarm and monitoring platform for UBI's computer network," September 2019;

15 Euclides Hamilton Miúdo Gaspar, MSc student in Computer Science and Engineering, UBI, dissertation title "*Investigação, desenho e implementação de soluções de comunicação de Voz sobre IP* (Research, Design and implementation of communications solutions using Voice over IP)," co-advised by Dr. Lúcio Studer (UBI), Dr. Emmanuel Conchon (*Université François Champolion,* Castre, France), September 2018;

14 João António dos Santos Mota, MSc student in Computer Science and Engineering, UBI, dissertation title "*Investigação e desenho de uma solução empresarial de web-hosting para Angola* (Research and Design of a Web-hosting entreprise solution for Angola)," September 2018;

13 Jusualdo Ferreira, MSc student in Computer Science and Engineering, UBI, dissertation title "*Investigação e Desenho de uma rede Pan-Académica para Angola* (Research and Design of a Pan-Academic Network for Angola)," co-advised by dr. Esmeralda Pires (FCCN), Dr. Rossitza Goleva (New Bulgarian University, Sofia, Bulgaria), September 2018;

12 Pedro Jesus, MSc student in Computer Science and Engineering, UBI, dissertation title "*Uso de Kinect para captura e análise de dados para o exercício de mobilidade Timed Up and Go* (Mobility exercise Timed Up and Go data analysis using Kinect captured data)," co-advised by Dr. Nuno Pombo (UBI), September 2017;

11 Nuno Galego, MSc student in Informatic Engineering, ULHT, dissertation title "Study of efficiency of IPv4 versus IPv6 communications within the Portuguese Academic Network RCTS," co-advised by dr. Carlos Friaças (FCCN), April 2017;

10 Celina Micaela Alexandre, MSc student in Computer Science and Engineering, UBI, dissertation title "Collection and analysis of biosignals in open environments," September 2016;

9 Filipe Miguel Carrão Gonçalves, MSc student in Computer Science and Engineering, UBI, doing his dissertation work in enterprise environment at Deloitte Lisbon, dissertation title "Core Solutions Transformation," November 2015;

8 Daniel Sabugueiro Oliveira, MSc student in Computer Science and Engineering, UBI, dissertation title "Training and monitoring of life-styles using interactive communications platforms," September 2014;

7 Hugo Veiga, MSc student in Computer Science and Engineering, UBI, dissertation title "Platform for monitoring Interactive Voice Response statistics," September 2014;

6 Mary Abina Karikari, MSc student in Computer Science and Engineering, UBI, dissertation title "Analysis of web protocols evolution on Internet traffic," June 2014;

5 Micael João da Silva Santos, MSc student in Computer Science and Engineering, UBI, dissertation title "*Uso da Entropia de Shannon para classificação de zonas artificiais ou naturais em imagens* (Use of Shannon's entropy for classification of artificial or natural areas in images)," October 2013;

4 David Jorge Cardoso Pereira, MSc student in Computer Science Engineering and Information Systems, ULHT, dissertation title "EZ-BUD *Orçamentação na Nuvem* (EZ-BUD Budgeting in the Cloud)," February 2013;

3 Ivan Pires, MSc student in Computer Science and Engineering, UBI, dissertation title "*Aplicação móvel e plataforma Web para suporte à estimação do gasto energético em actividade física* (Mobile application and web platform for support to the estimation of the energetic expenditure in physical activity)," July 2012;

2 Ricardo Ferreira, MSc student in Software Engineering and Information Systems, ULHT, dissertation title "*Testes e qualidade de software, melhores práticas aplicadas à indústria de desenvolvimento de software* (Tests and software quality, best practices applied to the software development industry)," May 2011;

1 Paula Sousa, MSc student in Biomedical Sciences, UBI, dissertation title "Assessment of the state of health by the measurement of a set bio physiological signals," November 2010.

He is or was co-advisor for the following Master of Science degree students:

7 Sofia Santos, MSc student in Bioengineering, UBI, dissertation title "Measurement of ovulation parameters based on acoustic signals," advised by Dr. Nuno Pombo (UBI), July 2018;

6 Leonel Mateus, MSc student in Computer Science and Engineering, UBI, dissertation title "*Investigação, desenho e implementação de soluções de redes sem fios para a indústria hoteleira* (Research, design and implementation of wireless networks for the hotel industry)," advised by Dr. Lúcio Studer (UBI), July 2018;

5 Márcio Rodrigues, MSc student in Medicine, UBI, dissertation title "*A aplicabilidade das redes neuronais no prognóstico vital de doentes com insuficiência cardíaca, pela análise da variabilidade da frequência cardíaca* (The applicability of neural networks in the vital prognosis of patients with heart insufficiency through the analysis of heart rate variability)," advised by Dr. Miguel Castelo-Branco (UBI), July 2017;

4 Catarina Lopes Vicente, MSc student in Fashion Design, UBI, dissertation title "*O design de calçado e a impressão 3D* (Shoe design and 3D printing)," advised by Dr. José Lucas (UBI), June 2016;

3 Liliana Vicente, MSc student in Psychology, UBI, dissertation title "*Impacto das SMS na inteligência emocional e na inteligência espiritual em alunos do ensino superior* (Impact of SMS in the emotional intelligence and in spiritual intelligence in university students)," advised by Dr. Maria da Graça Proença Esgalhado (UBI), September 2014;

2 Diana Patrícia Sabugueiro Oliveira, MSc student in Pedagogical Supervision (Psychology), UBI, dissertation title "*A eficácia da intervenção por SMS na auto-regulação da aprendizagem e da auto-eficácia académica geral em estudantes do ensino superior* (The efficacy of SMS intervention in learning auto-regulation and in academic general self-efficacy for university students)," advised by Dr. Maria da Graça Proença Esgalhado (UBI), September 2014;

1 Virginie Felizardo, MSc student in Electrotechnical and Computer Engineering, UBI, dissertation title "Acquisition of physiological parameters to assess the caloric expenditure using an accelerometer," advised by Dr. Pedro Diniz (UBI), November 2010.

Advisory of Bachelor of Science final project and internship students

Since 2007 he has advised or is advisor of over 70 projects and over 10 internships for students concluding the BSc in Computer Science related courses. Most of these projects are related to Ambient Assisted Living, but many are also on Internet technologies, and a few include some work with electronics or robotics. The internships involved mainly small local companies, with one exception, and the students were expected to show their skills as IT staff in real working environments.

The advisory of the projects included preparing the project proposal, its planning and deployment, and of course, accompanying the students throughout the process. Some projects where further developed as business plans and one of the projects was invited to present a working demonstration at the Congress of the *Associação Portuguesa para o Desenvolvimento da Comunicação* (APDC, 2014).

Apart from the supervision tasks, the advisory of internships included visits to the student in the hosting company and meeting with the student's company supervisor.

Details of the advisory of Bachelor of Science final project and internship students can be found in ANNEX E - Detailed advisory of students for the curricular units of Project, Internship, or Seminar.

Scientific supervisory of research scholarships

Since 2012 he has supervised more than thirty-five scholarships, awarded after public competitive calls, ranging from Scientific Initiation Grants to Post-Doctoral Grants. These scholarships have been funded by publicly funded projects but also through cooperation agreements celebrated between UBI and private companies. The overall funds assigned to these scholarships exceed 300K€. Details of the scientific supervisory activities can be found in ANNEX F - Detailed scientific supervisory of scholarships.

2.5 Part A- 5) Other professional relevant experience

Despite already being referenced in section 1.5, it is worth noting the following aspects of the author's professional experience:

December 2012 – December 2016: **Head of Laboratory at EyeSee Lda.**, Lisbon, Portugal.

In 2012 EyeSee (http://www.eyeseesolutions.com/) established a cooperation agreement with UBI, in which the company declared its intention to develop research at UBI through the funding of scholarships and laboratory equipment. Since December 2012 and as head of EyeSee Laboratory, he coordinated the research work of students who receive scholarships from EyeSee. The EyeSee project at UBI has been funded with over 38.000€.

August 2008 – April 2010: **Head of Research, Plux*, Engenharia de Biosensores, Lda.,*** Covilhã and Lisbon, Portugal.

As Head of Research of PLUX, his role consisted in developing new solutions and new products that could be marketable, to engage in communications with the prospective and current customers, and also to contribute to the CE marking of some of the company's products.

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3 Part B - Research activities

Following the recommendations for **Open Science** defined by the European Commission (Goals of research and innovation policy, European Commission, 2016), and also in the goals defined by the Portuguese Government in its 2016 document intitled "*Ciência Aberta, Conhecimento para todos, Princípios para todos*" (Ministry of Science, Technology and Higher Education of Portugal, February 2016), the most recent research papers have been submitted to magazines and journals that offer Open Access. Moreover, this is a specific requirement for the European projects that fund the research on which these papers were written.

For this reason, and because these papers / books / book chapters often are the outputs / deliverables of different projects funded directly or indirectly by the European Union and / or by the Portuguese Government, the quality of these magazines / journals / editors is closely monitored and the author has only published in reputed and indexed publications, as it can be observed in the following sections.

ANNEX A – Links for publications contains a list of publications in descending chronological order of publication, according to the index of Google Scholar.

3.1 Part B- 1) Scientific work

Habilitation Seminar

The Internet Protocol, Past, some current limitations and a glimpse of a possible future, Nuno Manuel Garcia dos Santos, seminar submitted as partial requirement for the Habilitation exams (*Provas de Agregação*), 30 and 31 March 2021.

PhD Thesis

Architectures and Algorithms for IPv4/IPv6-compliant Optical Burst Switching Networks, Nuno Manuel Garcia dos Santos, PhD thesis submitted to the University of Beira Interior in candidature for the Degree of Doctor of Philosophy in Computer Science and Engineering, advisors Dr. Mário Marques Freire and Dr. Paulo Miguel Nepomucemo Pereira Monteiro, 7 November 2008.

Edited books

He has edited seven books with international book publishers, one of which has also had a Chinese translated version. One book is on the scientific area of Computer Networks, and four books are on the areas of Ambient Assisted Living, comprehending Medical Informatics, Bioengineering, Computer Networks for AAL, Software Engineering for AAL and Programming.

7 Haruna Chiroma, Shafi'i M. Adbulhamid, Philippe Fournier-Viger, Nuno M. Garcia (editors), *Machine Learning and Data Mining for Emerging Trend in Cyber Dynamics*, Springer Nature, ISBN: 978-3-030-66288-2, Cham, Switzerland, April 2021.

6 Nuno M. Garcia, Ivan Miguel Pires, Rossitza Goleva (editors), *IoT Technologies for HealthCare, Proceedings of the 6th EAI International Conference, HealthyIoT 2019*, Braga, Portugal, Springer, ISBN: 978-3-030-42028-4, April 2020.

5 Ivan Ganchev, Nuno M. Garcia, Ciprian Dobre, Constandinos Mavromoustakis, Rossitza Goleva (editors), *Enhanced Living Environments, Algorithms, Architectures, Platforms, and Systems*, Springer, ISBN: 978-3-030-10752-9, January 2019.

4 Ciprian Dobre, Constandinos X. Mavromoustakis, Nuno M. Garcia, Rossitza I. Goleva, George Mastorakis (editors), *Ambient Assisted Living and Enhanced Living Environments – Principles, Technology and Control*, Elsevier, ISBN 978-0-12-805195-5, 2017

3 Rossitza Ivanova Goleva, Ivan Ganchev, Ciprian Dobre, Nuno Garcia and Carlos Valderrama (editors.), *Enhanced Living Environments: From Models to Technologies*, The IET, ISBN: 978-1-78561-211-4, September 2017.

1 bis Asoke K Taludker, Nuno M. Garcia, G. M. Jayateeertha (Editors), 全IP网络融合 (Convergence through all IP Networks), China Machine Press (Taylor and Francis Group), ISBN: 978-7-111-52645-2, 2016.

2 Nuno M. Garcia, Joel José P.C. Rodrigues (Editors), *Ambient Assisted Living, From Technology to Intervention*, *CRC Press,* ISBN: 1439869847, DDC: 353, Edition: Hardcover; June 2015.

1 Asoke K Taludker, Nuno M. Garcia, G. M. Jayateeertha (Editors), *Convergence through all IP Networks*, Pan Stanford Publishing, Singapore, ISBN: 978-981-4364-63-8 (Hardcover) and ISBN: 978-981-4364-64-5 (eBook), 2013.

Publication of peer-reviewed book chapters

The twenty-five chapters he has co-authored are mostly focused on the areas of Ambient Assisted Living, comprehending Medical Informatics, Bioengineering, Computer Networks for AAL, Software Engineering for AAL and Programming. All these chapters have undergone a blind peer-review chapter proposal submission and a peer-review stage for approval before publishing.

25 Ivan Miguel Pires, Gonçalo Marques, Nuno M. Garcia, Francisco Flórez-Revuelta, Maria Canavarro Teixeira, Eftim Zdravevski and Susanna Spinsante, "Recognition of Activities of Daily Living Based on a Mobile Data Source Framework," in Bio-inspired Neurocomputing (pp. 321-335),

Akash Kumar Bhoi, Pradeep Kumar Mallick, Chuan-Ming Liu, Valentina E. Balas (Editors), Springer, Singapore, ISBN: 978-981-15-5495-7, 2020.

24 Ivan Miguel Pires, Gonçalo Marques, Nuno M Garcia, Nuno Pombo, Francisco Flórez-Revuelta, Eftim Zdravevski and Susanna Spinsante, "A Review on The Artificial Intelligence Algorithms for The Recognition of Activities of Daily Living Using Sensors in Mobile Devices," in Handbook of Wireless Sensor Networks: Issues and Challenges in Current Scenario, Singh, P.K., Bhargava, B.K., Paprzycki, M., Kaushal, N.C., Hong, W.-C. (Editors), Springer Series in Advances in Intelligent Systems and Computing, Springer International Publishing Switzerland, ISSN: 2194-5357 (electronic), ISBN: 978-3-030-40304-1, ISBN: 978-3-030-40305-8, (eBook) DOI: 10.1007/978-3-030-40305-8, 2020.

23 Goncalo F. Valentim Pereira, Ivan Miguel Pires, Nuno M. Garcia, Eftim Zdravevski, Petre Lameski, Francisco Flórez-Revuelta and Susanna Spinsante, "Mobile Applications dedicated for cardiac patients: Research of available resources," in Internet of Things and Big Data Applications: Recent Advances and Challenges, Balas, Valentina E., Solanki, Vijender Kumar, Kumar, Raghvendra (Editors), Springer Series in Intelligent Systems Reference Library, Springer International Publishing Switzerland, ISSN: 1868-4394 (electronic), ISBN: 978-3-030-39118-8 ISBN: 978-3-030-39119-5, (eBook) DOI: 10.1007/978-3-030-39119-5, February 2020.

22 Eftim Zdravevski, Petre Lameski, Vladimir Trajkovik, Ivan Chorbev, Rossitza Goleva, Nuno Pombo, and Nuno M. Garcia, "Automation in Systematic, Scoping and Rapid Reviews by an NLP Toolkit: A Case Study in Enhanced Living Environments," in *Enhanced Living Environments, Algorithms, Architectures, Platforms, and Systems*, Ganchev, I, Garcia, N. M., Dobre, C., Mavromoustakis, C., Goleva R. (editors), Springer, ISBN: 978-3-030-10752-9, January 2019.

21 George Mastorakis, Jordi Mongay Batalla, Constandinos X. Mavromoustakis, Rossitza Goleva, Ciprian Dobre, Nuno M. Garcia, "TV white space spectrum administration," in *TV White Space Communications and Networks*, Robert Stewart, David Crawford and Andrew Stirling (editors), Elsevier, ISBN 978-0-08-100611-5, 2018.

20 Merilampi, S., Virkki, J., Pombo, N., & Garcia, N, "RFID Supporting IoT in Health and Well-Being Applications," in *Sensors for Diagnostics and Monitoring* (pp. 265-278), Kevin Yallup, Laura Basiricò (editors), CRC Press, ISBN: 9780815370208, October 2018.

19 Ciprian Dobre, Constandinos Mavromoustakis, Nuno Garcia, George Mastorakis, Rossitza Goleva, "Introduction to the AAL and ELE Systems," in A*mbient Assisted Living and Enhanced Living Environments, Principles, Technologies and Control*, Ciprian Dobre, Constandinos Mavromoustakis, Nuno Garcia, Rossitza Goleva, George Mastorakis (Editors), Publisher: Elsevier, ISBN: 9780128051955, November 2016.

18 Thomas Zinner, Florian Warmser, Helmut Leopold, Ciprian Dobre, Constandinos Mavromoustakis, Nuno Garcia, "Matching Requirements for Ambient Assisted Living and Enhanced Living Environments with Networking Technologies," in *Ambient Assisted Living and Enhanced Living Environments, Principles, Technologies and Control*, Ciprian Dobre, Constandinos Mavromoustakis, Nuno Garcia, Rossitza Goleva, George Mastorakis (Editors), Publisher: Elsevier, ISBN: 9780128051955, November 2016.

17 Ivan Chorbev, Vladimir Trajkovik, Rossitza Goleva, Nuno Garcia, "Cloud Based Smart Living System Prototype," in *Ambient Assisted Living and Enhanced Living Environments, Principles, Technologies and Control*, Ciprian Dobre, Constandinos Mavromoustakis, Nuno Garcia, Rossitza Goleva, George Mastorakis (Editors), Publisher: Elsevier, ISBN: 9780128051955, November 2016.

16 Rozzitza Goleva, Nuno Garcia, Constandinos Mavromoustakis, Ciprian Dobre, George Mastorakis, Rumen Steinov, Ivan Chorbev, Vladimir Trajkovik, "AAL and ELE Platform Architecture," in *Ambient Assisted Living and Enhanced Living Environments, Principles, Technologies and Control*, Ciprian Dobre, Constandinos Mavromoustakis, Nuno Garcia, Rossitza Goleva, George Mastorakis (Editors), Publisher: Elsevier, ISBN: 9780128051955, November 2016.

15 Vasos Hadjionannou, Constandinos X. Mavromoustakis, George Mastorakis, Ciprian Dobre, Rossitza Goleva, Nuno Garcia, "Cloud-Oriented Domain for AAL," in *Ambient Assisted Living and Enhanced Living Environments, Principles, Technologies and Control*, Ciprian Dobre, Constandinos Mavromoustakis, Nuno Garcia, Rossitza Goleva, George Mastorakis (Editors), Publisher: Elsevier, ISBN: 9780128051955, November 2016.

14 Rossitza Goleva, Nuno Garcia, Constandinos Mavromoustakis, Ciprian Dobre, George Mastorakis, Rumen Steinov, "End-Users Testing of Enhanced Living Environments Platform and Services," in *Ambient Assisted Living and Enhanced Living Environments, Principles, Technologies and Control*, Ciprian Dobre, Constandinos Mavromoustakis, Nuno Garcia, Rossitza Goleva, George Mastorakis (Editors), Publisher: Elsevier, ISBN: 9780128051955, November 2016.

13 Gonçalo Marques, Nuno Garcia, Nuno Pombo, "A Survey on IoT: Architectures, Elements, Applications, QoS, Platforms and Security concepts," in *Advances in Mobile Cloud Computing and Big Data under the 5G Era*, Constandinos Mavromoustakis, George Mastorakis, Ciprian Dobre (Editors), Publisher: Springer, ISBN: 978-3-319-45145-9, October 2016.

12 Spinsante S., Gambi E., Montanini L., Raffaeli L., Lambrinos L., Felizardo V., Pombo N, Garcia N., "Towards interoperable enhanced living environments," in *Active and Assisted Living: Technologies and Applications*, Francisco Flórez-Revuelta, Alexandros Andre Chaaraoui (Editors), Publisher: IET, ISBN: 9781849199872, Edition: Hardcover, September 2016.

11 Pedro Diniz Gaspar, Virginie Felizardo, Nuno M. Garcia, "A Review of Monitoring and Assisted Therapeutic Technology for AAL Applications," in *Ambient Assisted Living, From Technology to Intervention*, Nuno M. Garcia, Joel José P.C. Rodrigues (Editors), Publisher: CRC Press, ISBN: 1439869847, DDC: 353, Edition: Hardcover; June 2015.

10 Nuno M. Garcia, Paula Sousa, Virginie Felizardo, "Ambient Assisted Living, from Technology to Intervention," in *Ambient Assisted Living, From Technology to Intervention*, Nuno M. Garcia, Joel José P.C. Rodrigues (Editors), Publisher: CRC Press, ISBN: 1439869847, DDC: 353, Edition: Hardcover; June 2015.

9 João C. Silva, Artur M. Arsénio, Nuno M. Garcia, "Mobility and Multihoming Protocols Data Transmission Protocols," in *Ambient Assisted Living, From Technology to Intervention*, Nuno M. Garcia, Joel José P.C. Rodrigues (Editors), Publisher: CRC Press, ISBN: 1439869847, DDC: 353, Edition: Hardcover; June 2015.

8 Nuno Pombo, Nuno Garcia, Kouamana Bousson and Virginie Felizardo, "Artificial Neural Learning Based on Big Data Process for e-Health Applications," in *Artificial Intelligence Technologies and the Evolution of Web 3.0*, Tomayess Issa and Pedro Isaías (Editors), IGI Global, ISBN13: 9781466681477, ISBN10: 1466681470, EISBN13: 9781466681484, doi:10.4018/978-1-4666-8147-7, 2015.

7 P.S. Sousa, D. Sabugueiro, V. Felizardo, R. Couto, I. Pires, N.M. Garcia, "mHealth Sensors and Applications for Personal Aid," in *Mobile Health, a Technology Road Map*, Sasan Adibi (editor), Springer Series in Bio-/Neuroinformatics , Springer International Publishing Switzerland, ISSN 2193-9349, ISSN: 2193-9357 (electronic), ISBN: 978-3-319-12816-0, ISBN: 978-3-319-12817-7 (eBook), DOI:10.1007/978-3-319-12817-7, Library of Congress Control Number: 2014953523, 2015.

6 V. Felizardo, P.S. Sousa, D. Sabugueiro, C. Alexandre, R. Couto, N.M. Garcia, I. Pires, "E-Health: Current Status and Future Trends," in *Handbook of Research on Democratic Strategies and Citizen-Centered E-Government Services*, Dolićanin, Ćemal, Ejub Kajan, Dragan Randjelović, and Boban Stojanović (Editors), IGI Global, doi:10.4018/978-1-4666-7266-6, ISBN13: 9781466672666, ISBN10: 1466672668, EISBN13: 9781466672673, 2014.

5 Nuno Pombo, Nuno M. Garcia, Kouamana Bousson and Virginie Felizardo, "Machine Learning Approaches to Automated Medical Decision Support Systems," in *Handbook of Research on Artificial Intelligence Techniques and Algorithms* (2 Volumes), Pandian Vasant (Editor), IGI Global, ISBN13: 9781466672581, ISBN10: 1466672587, EISBN13: 9781466672598, doi:10.4018/978-1-4666-7258-1, 2014.

4 Pedro Dinis Gaspar, Virginie Felizardo, and Nuno M. Garcia, "Energy-Harvesting Methods for Medical Devices," in *Rechargeable Sensor Networks: Technology, Theory, and Application*, Jiming Chen, Shibo He, Youxian Sun (Editors), World Scientific, pp. 327-356. doi: 10.1142/9789814525466_0011, ISBN-13: 978-9814525459, ISBN-10: 9814525456, 2014.

3 Nuno M. Garcia, Nuno C. Garcia, "IP over Optical," in *Convergence through all IP Networks*, Asoke K Talukder, Nuno M. Garcia, G. M. Jayateeertha (Editors), Publisher: Pan Stanford Publishing, Singapore, ISBN: 978-981-4364-63-8 (Hardcover), ISBN; 978-981-4364-64-5 (eBook), 2013.

2 Asoke K Talukder, Nuno M. Garcia, G. M. Jayateertha, "All IP Networks," in *Convergence through all IP Network*s, Asoke K Talukder, Nuno M. Garcia, G. M. Jayateeertha (Editors), Publisher: Pan Stanford Publishing, Singapore, ISBN: 978-981-4364-63-8 (Hardcover), ISBN: 978-981-4364-64-5 (eBook), 2013.

1 Nuno M. Garcia, Paula Sofia Sousa, Isabel G. Trindade, Rui Miguel, José Lucas, "Smart Clothing for Health-Care," in *Telemedicine and E-Health Services, Policies and Applications: Advancements and Developments in Telemedicine*, Joel J. P. C. Rodrigues, Isabel de la Torre Díez, and Beatriz Sainz de Abajo (Editors), Publisher: IGI Global, DOI: 10.4018/978-1-46660-888-7, ISBN13: 9781466608887, ISBN10: 1466608889, EISBN13: 9781466608894, March 2012.

Edition of Special Issues in indexed Clarivate Web of Knowledge and/or Scopus magazines or journals

He has edited or is currently editing five special issues on areas that include Medical Informatics, Bioengineering and Algorithms for Medicine. Of these magazines, two are ranked as Q1, one as Q2, and one as Q3 (at the time of the special issue proposal or publication).

5 Guest Editor for the Special Issue to appear in *Journal of Healthcare Engineering*, Sensor-Based Systems for Independent Living of Ageing People, Editors: Ivan Miguel Pires, Nuno M. Garcia, Susanna Spinsante, Gonçalo Marques, Journal of Healthcare Engineering, Hindawi (IF 2019: 1.803, SCOPUS Q2 Biomedical Engineering, H Index 23), March 2021.

4 Topic Editor for the Special Issue to appear in *Frontiers of Computer Science*, Human-Media Interaction on Biosignals for Human-Computer Interaction, Editors: Hugo Silva, Nuno Garcia, Erin Solovey, Frontiers in Computer Science, Springer (IF 2018: 1.129, SCOPUS Q2 Computer Science, H Index 25), October 2020.

3 Associate-Editor for the Special Section to appear in *IEEE Access* magazine on Predictive Algorithms for Healthcare, Editors: Nuno M. Garcia, Victor Hugo Albuquerque, Nuno Pombo, Madalena Costa, Deepak Gupta, Miguel Castelo-Branco, IEEE Access, IEEE (IF 2018: 4.098, SCOPUS Q1 Computer Science, H Index: 56), July 2023 (expected).

2 Guest Co-Editor for the special issue on Brain Computer Interfaces for Neurorobotics: Methods and Applications, in *BioMed Research International* journal, Guest Editors: Victor H. C. de Albuquerque, Robertas Damacevecius, Nuno M. Garcia, Plácido Rogério Pinheiro, Pedro P. R. Filho, Hindawi Publishing Corporation (IF 2015: 2.134, SCOPUS Q1 Medicine, H Index: 94), August 2017.

1 Guest Co-Editor for the special issue on Mobile Information Systems for Ambient Assisted Living, in *Mobile Information Systems* journal, Guest Editors: Ivan Ganchev, Nuno M. Garcia, Torsten Braun, and Carlos Valderrama, Hindawi Publishing Corporation (ISSN: 1574-017X (Print) ISSN: 1875-905X (Online) DOI: 10.1155/9071) (IF 2014: 0.949, SCOPUS Q3 Computer Science, H Index: 25), July 2016.

Publication of scientific papers in indexed Clarivate Web of Knowledge [SM] and/or Scopus magazines or journals

The following list details the papers published in magazines or journals indexed in Scopus and or Clarivate Web of Knowledge [SM], and the classification and Impact Factor (IF) of these magazines/journals at the time of the publishing of the paper, as well as the scientific area the magazine / journal belongs to, as reported by these indexing platforms. Regarding the classification, D1 stands for 1st Decile, and Q1, Q2, Q3 and Q4 stand for 1st, 2nd, 3rd and 4th Quartile, respectively. Many of these publications are result of the European projects the author is involved with, and also, the author tries to integrate his PhD and MSc students in international research projects and teams.

Number	Authors, title, magazine, date of publication, DOI	Publication details
67	Paulo Alexandre Neves, João Simões, Ricardo Costa, Luís Pimenta, Norberto Jorge Gonçalves, Carlos Albuquerque, Carlos Cunha, Eftim Zdravevski, Petre Lameski, Nuno M Garcia, Ivan Miguel Pires, "Thought on Food: A Systematic Review of Current Approaches and Challenges for Food Intake Detection". Sensors 22 (17), 6443, August 2022 https://doi.org/10.3390/s22176443	Q2 IF 2021: 3.576 Computer Science: Information Systems
66	Eduarda Sofia Bastos, Rui Pedro Duarte, Francisco Alexandre Marinho, Roman Rudenko, Hanna Vitaliyivna Denysyuk, Norberto Jorge Gonçalves, Eftim Zdravevski, Carlos Albuquerque, Nuno M Garcia, Ivan Miguel Pires, "A Brief	Q3 IF 2021: n/a

Number	Authors, title, magazine, date of publication, DOI	Publication details
	Review on Gender Identification with Electrocardiography Data". Applied System Innovation 5 (4), 81, August 2022 https://doi.org/10.3390/asi5040081	Computer Science: Artificial Intelligence
65	Hanna Vitaliyivna Denysyuk, João Amado, Norberto Jorge Gonçalves, Eftim Zdravevski, Nuno M Garcia, Ivan Miguel Pires, "Monitoring of Cardiovascular Diseases: An Analysis of the Mobile Applications Available in the Google Play Store". Electronics 11 (12), 1881, June 2022 https://doi.org/10.3390/electronics11121881	Q2 IF 2021: 2.690 Computer Science: Signal Processing
64	Luís Pimenta, Nuno M Garcia, Eftim Zdravevski, Ivan Chorbev, Vladimir Trajkovik, Petre Lameski, Carlos Albuquerque, Ivan Miguel Pires, "Can the Eight Hop Test Be Measured with Sensors? A Systematic Review". Sensors 22 (9), 3582, May 2022 https://doi.org/10.3390/s22093582	Q2 IF 2021: 3.576 Computer Science: Information Systems
63	Ivan Miguel Pires, Nuno M Garcia, Eftim Zdravevski, Petre Lameski, "Daily motionless activities: A dataset with accelerometer, magnetometer, gyroscope, environment, and GPS data". Scientific Data 9 (1), 1-11, March 2022 https://doi.org/10.1038/s41597-022-01213-9	Q1 IF 2021: 3.476 Computer Science: Miscellaneous
62	Boban Joksimoski, Eftim Zdravevski, Petre Lameski, Ivan Miguel Pires, Francisco José Melero, Tomás Puebla Martinez, Nuno M Garcia, Martin Mihajlov, Ivan Chorbev, Vladimir Trajkovik, "Technological solutions for sign language recognition: a scoping review of research trends, challenges, and opportunities". IEEE Access, vol. 10, pp. 40979-40998, March 2022 https://doi.org/10.1109/ACCESS.2022.3161440	Q1 IF 2021: 3.476 Computer Science: Miscellaneous
61	Faisal Hussain, Syed Ghazanfar Abbas, Ivan Miguel Pires, Sabeeha Tanveer, Ubaid U Fayyaz, Nuno M Garcia, Ghalib A Shah, Farrukh Shahzad, "A Two-Fold Machine Learning Approach to Prevent and Detect IoT Botnet Attacks". IEEE Access 9, 163412-163430, November 2021 https://doi.org/10.1109/ACCESS.2021.3131014	Q1 IF 2021: 3.476 Computer Science: Miscellaneous
60	Abdelali Hadir, Younes Regragui, Nuno M Garcia, "Accurate range-free localization algorithms based on PSO for wireless sensor networks". IEEE Access 9, 149906-149924, October 2021 https://doi.org/10.1109/ACCESS.2021.3123360	Q1 IF 2021: 3.476 Computer Science: Miscellaneous

Number	Authors, title, magazine, date of publication, DOI	Publication details
59	Virginie Felizardo, Diogo Machado, Nuno M Garcia, Nuno Pombo, Pedro Brandão, "Hypoglycaemia Prediction Models With Auto Explanation". IEEE Access 10, 57930-57941, October 2021 https://doi.org/10.1109/ACCESS.2021.3117340	Q1 IF 2021: 3.476 Computer Science: Miscellaneous
58	Ivan Miguel Pires, Hanna Vitaliyivna Denysyuk, María Vanessa Villasana, Juliana Sá, Petre Lameski, Ivan Chorbev, Eftim Zdravevski, Vladimir Trajkovik, José Francisco Morgado, and Nuno M. Garcia. "Mobile 5P-Medicine Approach for Cardiovascular Patients". Sensors 2021, 21, no. 21, 6986, October 2021 https://doi.org/10.3390/s21216986	Q1 IF 2020: 3.275 Computer Science: Information Systems.
57	Aleksandar Jevremovic, Mladen Veinovic, Milan Cabarkapa, Marko Krstic, Ivan Chorbev, Ivica Dimitrovski, Nuno Garcia, Nuno Pombo, Milos Stojmenovic, "Keeping Children Safe online with Limited Resources: Analyzing what is seen and heard". IEEE Access 9, 132723-132732, September 2021 https://doi.org/10.1109/ACCESS.2021.3114389	Q1 IF 2021: 3.476 Computer Science: Miscellaneous
56	Virginie Felizardo, Nuno M Garcia, Nuno Pombo, Imen Megdiche, "Data-based algorithms and models using diabetics real data for blood glucose and hypoglycaemia prediction–a systematic literature review". Artificial Intelligence in Medicine 118, 102120, August 2021 https://doi.org/10.1016/j.artmed.2021.102120	Q1 IF 2021: 5.326 Computer Science: Artificial Intelligence
55	Filipe Ferreira, Ivan Miguel Pires, Vasco Ponciano, Mónica Costa, María Vanessa Villasana, Nuno M. Garcia, Eftim Zdravevski, Petre Lameski, Ivan Chorbev, Martin Mihajlov, and Vladimir Trajkovik "Experimental Study on Wound Area Measurement with Mobile Devices". Sensors 2021, 21, no. 17, 5762, August 2021 https://doi.org/10.3390/s21175762	Q1 IF 2020: 3.275 Computer Science: Information Systems.
54	Ivan Miguel Pires, Faisal Hussain, Gonçalo Marques, and Nuno M. Garcia. "Comparison of machine learning techniques for the identification of human activities from inertial sensors available in a mobile device after the application of data imputation techniques". Computers in Biology and Medicine, 135, 104638, August 2021 https://doi.org/10.1016/j.compbiomed.2021.104638	Q1 IF 2020: 3.434 Computer Science / Medicine

Number	Authors, title, magazine, date of publication, DOI	Publication details
53	Ace Dimitrievski, Sonja Filiposka, Francisco José Melero, Eftim Zdravevski, Petre Lameski, Ivan Miguel Pires, Nuno M. Garcia, José Paulo Lousado, and Vladimir Trajkovik. "Rural Healthcare IoT Architecture Based on Low-Energy LoRa". Int. J. Environ. Res. Public Health 2021, 18, no. 14, 7660, July 2021 https://doi.org/10.3390/ijerph18147660	Q1 IF 2020: 3.391 Medicine
52	Ivan Miguel Pires, Nuno M. Garcia, Eftim Zdravevski, and Petre Lameski. "Indoor and outdoor environmental data: A dataset with acoustic data acquired by the microphone embedded on mobile devices". Data-In-Brief 2021, 36C, 107051, May 2021 https://doi.org/10.1016/j.dib.2021.107051	Q3 IF 2020: 1.13 Multidisciplinary
51	Ace Dimitrievski, Eftim Zdravevski, Petre Lameski, María Vanessa Villasana, Ivan Miguel Pires, Nuno M. Garcia, Francisco Flórez-Revuelta, and Vladimir Trajkovik. "Towards Detecting Pneumonia Progression in COVID-19 Patients by Monitoring Sleep Disturbance Using Data Streams of Non-Invasive Sensor Networks". Sensors 2021, 21, no. 9, 3030, April 2021 https://doi.org/10.3390/s21093030	Q1 IF 2020: 3.275 Computer Science: Information Systems.
50	Faisal Hussain, Syed Ghazanfar Abbas, Ghalib A. Shah, Ivan Miguel Pires, Ubaid U. Fayyaz, Farrukh Shahzad, Nuno M. Garcia, and Eftim Zdravevski. "A Framework for Malicious Traffic Detection in IoT Healthcare Environment". Sensors 2021, 21, no. 9, 3025, April 2021 https://doi.org/10.3390/s21093025	Q1 IF 2020: 3.275 Computer Science: Information Systems.
49	Ivan Miguel Pires, Eurico Lopes, María Vanessa Villasana, Nuno M. Garcia, Eftim Zdravevski, and Vasco Ponciano. "A Brief Review on the Sensor Measurement Solutions for the Ten-Meter Walk Test". Computers 2021, 10, 49, April 2021 https://doi.org/10.3390/computers10040049	Q2 IF 2020: 0.404 Computer Science)
48	Filipe Ferreira, Ivan Miguel Pires, Mónica Costa, Vasco Ponciano, Nuno M. Garcia, Eftim Zdravevski, Ivan Chorbev, and Martin Mihajlov. "A Systematic Investigation of Models for Color Image Processing in Wound Size Estimation". Computers 2021, 10, 43, April 2021 https://doi.org/10.3390/computers10040043	Q2 IF 2020: 0.404 Computer Science)

Number	Authors, title, magazine, date of publication, DOI	Publication details
47	Diogo Luís Marques, Henrique Pereira Neiva, Ivan Miguel Pires, Eftim Zdravevski, Martin Mihajlov, Nuno M. Garcia, Juan Diego Ruiz-Cárdenas, Daniel Almeida Marinho, and Mário Cardoso Marques. "An Experimental Study on the Validity and Reliability of a Smartphone Application to Acquire Temporal Variables during the Single Sit-to-Stand Test with Older Adults". Sensors 2021, 21, no. 6, 2050, March 2021 https://doi.org/10.3390/s21062050	Q1 IF 2020: 3.275 Computer Science: Information Systems.
46	Igor Matias, Nuno Garcia, Sandeep Pirbhulal, Virginie Felizardo, Nuno Pombo, Henriques Zacarias, Miguel Sousa, Eftim Zdravevski, "Prediction of Atrial Fibrillation using artificial intelligence on Electrocardiograms: A systematic review," Computer Science Review, Volume 39, 2021, 100334, ISSN 1574-0137, Fev 2021 https://doi.org/10.1016/j.cosrev.2020.100334	D1 IF 2019: 7.707 H Index 2019: 34 Computer Science
45	Jovan Kalajdjieski, Eftim Zdravevski, Roberto Corizzo, Petre Lameski, Slobodan Kalajdziski, Ivan Miguel Pires, Nuno M. Garcia, and Vladimir Trajkovik. "Air Pollution Prediction with Multi-Modal Data and Deep Neural Networks". Remote Sens. 2020, 12, 4142, December 2020 https://doi.org/10.3390/rs12244142	Q1 IF 2020: 1.285 Earth and Planetary Sciences
44	Ivan Miguel Pires, Nuno M. Garcia, Eftim Zdravevski, and Petre Lameski. "Activities of Daily Living with Motion: A Dataset with Accelerometer, Magnetometer and Gyroscope Data from Mobile Devices". Data-In-Brief 2020, 33C, 106628, December 2020 https://doi.org/10.1016/j.dib.2020.106628	Q3 IF 2020: 1.13 Multidisciplinary
43	Petar Tonkovic, Sloboban Kalajdziski, Eftim Zdravevski, Petre Lameski, Roberto Corizzo, Ivan Miguel Pires, Nuno M. Garcia, Tatjana Loncar-Turukalo, and Vladimir Trajkovik, "Literature on Applied Machine Learning in Metagenomic Classification: A Scoping Review". Biology 2020, 9, 453, December 2020 https://doi.org/10.3390/biology9120453	Q1 IF 2020: 5.079 Agricultural and Biological Sciences
42	Jasmina Baraković Husić, Francisco José Melero, Sabina Baraković, Petre Lameski, Eftim Zdravevski, Petra Maresova, Ondrej Krejcar, Ivan Chorbev, Nuno M. Garcia, Vladimir Trajkovik, "Aging at work: A review of recent trends and future directions," in Future Internet, MDPI, 17(20), October 2020 https://doi.org/10.3390/ijerph17207659	Q2 H Index 2019: 20 Computer Science

Number	Authors, title, magazine, date of publication, DOI	Publication details
41	Ivan Miguel Pires, Faisal Hussain, Nuno M. Garcia, Eftim Zdravevski, “Improving Human Activity Monitoring by Imputation of Missing Sensory Data: Experimental Study,” in Future Internet, MDPI, 12(9), September 2020 https://doi.org/10.3390/fi12090155	Q2 H Index 2019: 20 Computer Science
40	Ali Sodhro, Sandeep Pirbhulal, Gul Sodhro, Muhammad Muzammal, Zongwei Luo, Andrei Gurtov, Antônio Roberto L. de Macedo, Lei Wang, Nuno M Garcia, Victor Hugo C Albuquerque, “Towards 5G-enabled Self Adaptive Green and Reliable Communication in Intelligent Transportation System," in IEEE Transactions on Intelligent Transportation Systems, IEEE, October 2020 https://doi.org/10.1109/TITS.2020.3019227	D1 IF 2019: 6.319 H Index 2019: 132 Computer Science
39	Ivan Miguel Pires, Vasco Ponciano, Nuno M. Garcia, Eftim Zdravevski, “Analysis of the Results of Heel-Rise Test with Sensors: A Systematic Review,” in Electronics, MDPI, Vol. 9, July 2020 https://doi.org/10.3390/electronics9071154	Q2 IF 2019: 2.412 H Index 2019: 26 Computer Science
38	Vasco Ponciano, Ivan Miguel Pires, Fernando Reinaldo Ribeiro, Nuno M. Garcia, Maria Vanessa Villasana, Eftim Zdravevski, Petre Lameski, “Machine Learning Techniques with ECG and EEG Data: An Exploratory Study,” in Computers, MDPI, Vol. 9, June 2020 https://doi.org/10.3390/computers9030055	Q2 IF 2019: 2.690 H Index 2019: 14 Computer Science
37	Ivan Miguel Pires, Nuno M. Garcia, Eftim Zdravevski, “Measurement of Results of Functional Reach Test with Sensors: A Systematic Review,” in Electronics, MDPI, Special Issue "Electronic Solutions for Artificial Intelligence Healthcare", June 2020 https://doi.org/10.3390/electronics9071078	Q2 IF 2019: 2.412 H Index 2019: 26 Computer Science
36	Bruno Tavares, Ivan Miguel Pires, Goncalo Santos Marques, Nuno M. Garcia, Eftim Zdravevski, Petre Lameski, Vladimir Trajkovik, Aleksandar Jevremovic, “Mobile Applications for Training Plan using Android Devices: A Systematic Review and a Taxonomy Proposal for the Extracted Features,” in Information, MDPI, Special Issue "Ubiquitous Sensing for Smart Health Monitoring", June 2020 https://doi.org/10.3390/info11070343	Q2 H Index 2019: 20 Computer Science
35	Leonice Souza-Pereira, Nuno Pombo, Sofia Ouhbi, Virginie Felizardo and Nuno Garcia, “Clinical Decision Support Systems for Chronic Diseases: A	Q1 IF 2018: 3.424 H Index 2018: 83

Number	Authors, title, magazine, date of publication, DOI	Publication details
	Systematic Literature Review," in Computer Methods and Programs in Biomedicine, Elsevier, May 2020 https://doi.org/10.1016/j.cmpb.2020.105565	Computer Science
34	Vasco Ponciano, Ivan Miguel Pires, Fernando Reinaldo Ribeiro, Gonçalo Marques, Maria Vanessa Villasana, Nuno M. Garcia, Eftim Zdravevski and Susanna Spinsante, "Identification of Diseases Based on the Use of Inertial Sensors: A Systematic Review," in Electronics, MDPI, vol. 9, May 2020 https://doi.org/10.3390/electronics9050778	Q2 IF 2018: 1.764 H Index 2018: 21 Computer Science
33	María V. Villasana, Ivan M. Pires, Juliana Sá, Nuno M. Garcia, Eftim Zdravevski, Ivan Chorbev, Petre Lameski and Francisco Flórez-Revuelta, "Promotion of Healthy Nutrition and Physical Activity Lifestyles for Teenagers: A Systematic Literature Review of The Current Methodologies", published in Journal of Personalized Medicine, MDPI, vol. 10, March 2020 https://doi.org/10.3390/jpm10010012	Q1 H Index 2018: 17 Medicine
32	Vasco Ponciano, Ivan Miguel Pires, Fernando Reinaldo Ribeiro, Gonçalo Marques, Nuno M. Garcia, Nuno Pombo, Susanna Spinsante, and Eftim Zdravevski, "Is The Timed-Up and Go Test Feasible in Mobile Devices? A Systematic Review", in Electronics, MDPI, vol. 9, March 2020 https://doi.org/10.3390/electronics9030528	Q2 IF 2018: 1.764 H Index 2018: 21 Computer Science
31	Ivan Miguel Pires, Gonçalo Marques, Nuno M. Garcia, Francisco Flórez-Revuelta, Maria Canavarro Teixeira, Eftim Zdravevski, Susanna Spinsante and Miguel Coimbra, "Pattern Recognition Techniques for the Identification of Activities of Daily Living Using a Mobile Device Accelerometer," in Electronics, MDPI, vol. 9, March 2020 https://doi.org/10.3390/electronics9030509	Q2 IF 2018: 1.764 H Index 2018: 21 Computer Science
30	Rui Faria, Inês Lopes, Ivan Miguel Pires, Gonçalo Marques, Solange Fernandes, Nuno M. Garcia, José Lucas, Aleksandar Jevremović, Eftim Zdravevski and Vladimir Trajkovik, "Circular Economy for Clothes Using Web and Mobile Technologies - A Systematic Review and a Taxonomy Proposal," in Information, MDPI, vol. 11, March 2020 https://doi.org/10.3390/info11030161	Q3 H Index 2018: 14 Computer Science
29	Iago Sestrem Ochôa, Luis Augusto Silva, Gabriel de Mello, Nuno M. Garcia, Juan Francisco de Paz Santana and Valderi Reis Quietinho Leithardt, "A Cost	Q1 IF 2018: 3.031

Number	Authors, title, magazine, date of publication, DOI	Publication details
	Analysis of Implementing a Blockchain Architecture in a Smart Grid Scenario Using Sidechains," in Sensors, MDPI, vol. 20, February 2020 https://doi.org/10.3390/s20030843	H Index 2018: 132 Computer Science
28	Ivan Miguel Pires, Gonçalo Marques, Nuno M. Garcia, Francisco Flórez-Revuelta, Vasco Ponciano and Salome Oniani, "A Research on the Classification and Applicability of the Mobile Health Applications," in Journal of Personalized Medicine, MDPI, vol. 10, February 2020 https://doi.org/10.3390/jpm10010011	Q1 H Index 2018: 17 Medicine
27	Ivan Miguel Pires and Nuno M. Garcia, "Identification of Warning Situations in Road Using Cloud Computing Technologies and Sensors Available in Mobile Devices: A Systematic Review," in Electronics, MDPI, vol. 9, February 2020 https://doi.org/10.3390/electronics9030416	Q2 IF 2018: 1.764 H Index 2018: 21 Computer Science
26	José M. Ferreira, Ivan Miguel Pires, Gonçalo Marques, Nuno M. Garcia, Eftim Zdravevski, Petre Lameski, Francisco Flórez-Revuelta, Susanna Spinsante, Lina Xu, "Activities of Daily Living and Environment Recognition Using Mobile Devices: A Comparative Study," in Electronics, MDPI, vol. 9, January 2020 https://doi.org/10.3390/electronics9010180	Q2 IF 2018: 1.764 H Index 2018: 21 Computer Science
25	José M. Ferreira, Ivan Miguel Pires, Gonçalo Marques, Nuno M. Garcia, Eftim Zdravevski, Petre Lameski, Francisco Flórez-Revuelta and Susanna Spinsante, "Identification of Daily Activites and Environments Based on the AdaBoost Method Using Mobile Device Data: A Systematic Review," in Electronics, MDPI, vol. 9, January 2020 https://doi.org/10.3390/electronics9010192	Q2 IF 2018: 1.764 H Index 2018: 21 Computer Science
24	Ivan Miguel Pires, Gonçalo Marques, Nuno M. Garcia, Nuno Pombo, Francisco Flórez-Revuelta, Susanna Spinsante, Maria Canavarro Teixeira and Eftim Zdravevski, "Recognition of Activities of Daily Living and Environments Using Acoustic Sensors Embedded on Mobile Devices," in Electronics, MDPI, vol. 19, November 2019 https://doi.org/10.3390/electronics8121499	Q2 IF 2018: 1.764 H Index 2018: 21 Computer Science
23	María V. Villasana, Ivan M. Pires, Juliana Sá, Nuno M. Garcia, Eftim Zdravevski, Ivan Chorbev, Petre Lameski and Francisco Flórez-Revuelta, "Mobile Applications for the Promotion and Support of Healthy Nutrition and Physical	D1 Scopus CiteScore: 4.86 Computer Science

Number	Authors, title, magazine, date of publication, DOI	Publication details
	Activity Habits: A Systematic Review, Extraction of Features and Taxonomy Proposal," in The Open Bioinformatics Journal, Benhtam Open, November 2019 http://dx.doi.org/10.2174/1875036201912010050	
22	Iago Sestrem Ochôa, Luis Augusto Silva, Gabriel de Mello, Bruno Alves da Silva, Juan Francisco de Paz, Gabriel Villarrubia González, Nuno M. Garcia, and Valderi Reis Quietinho Leithardt, "PRICHAIN: A Partially Decentralized Implementation of UbiPri Middleware Using Blockchain," in Sensors, MDPI, vol. 19, November 2019 https://doi.org/10.3390/s19204483	Q2 IF 2018: 3.031 H Index 2018: 132 Computer Science
21	André Pinho, Nuno Pombo, Bruno Silva, Kouamana Bousson, Nuno Garcia, "Towards an accurate sleep apnea detection based on ECG signal: The quintessential of a wise feature selection," in Applied Soft Computing Journal, Elsevier, vol. 83, October 2019 https://doi.org/10.1016/j.asoc.2019.105568	Q1 IF 2018: 4.873 H Index 2018: 110 Computer Science
20	Gonçalo Marques, Rui Pitarma, Nuno M. Garcia, Nuno Pombo, "Internet of Things Architectures, Technologies, Applications, Challenges and Future Directions for Enhanced Living Environments and Healthcare Systems: A Review," in the Networks section of Electronics, MDPI, September 2019 https://doi.org/10.3390/electronics8101081	Q1 IF 2018: 1.764 H Index 2018: 21 Computer Science
19	Tim Collins, Sandra I. Woolley, Salome Oniani, Ivan Miguel Pires, Nuno M. Garcia, Sean J. Ledger and Anand Pandyan, "Version Reporting and Assessment Approaches for New and Updated Activity and Heart Rate Monitors," in Sensors, MDPI, vol. 19, pp. 1705, April 2019 https://doi.org/10.3390/s19071705	Q1 IF 2018: 3.031 H Index 2018: 132 Computer Science
18	Natasha Koceska, Saso Koceski, Beomonte Zobel, Vladimir Trajkovik, Nuno M. Garcia, "A Telemedicine Robot System for Assisted and Independent Living," in Sensors, MDPI, vol. 19(4), pp. 834, February 2019 https://doi.org/10.3390/s19040834	Q1 IF 2018: 3.031 H Index 2018:132 Computer Science
17	Nuno M. Garcia, Fábio Gil, Bárbara Matos, Coulibaly Yahaya, Nuno Pombo, Rossitza Ivanova Goleva, "Keyed User Datagram Protocol: concepts and operation of an almost reliable connectionless transport protocol," in IEEE Access, IEEE, vol. 7, pp. 18951-18963, February 2019	Q1 IF 2018: 4.098 H Index 2018: 56 Computer Science

Number	Authors, title, magazine, date of publication, DOI	Publication details
	https://doi.org/10.1109/ACCESS.2018.2886707	
16	Henrique Pereira, Sara Fernandes, Diana Aurélio, João Benquerença, Samuel Monteiro, Rosa Marina Afonso, Graça Esgalhado, Manuel Loureiro, Delfina Ferro, Nuno Garcia, Juan Pedro Serrano, "Qualidade do Sono e Funcionamento Sexual em Adultos Saudáveis / Quality of Sleep and Sexual Functioning in Healthy Adults," in Revista Internacional de Andrologia, 2019 https://doi.org/10.1016/j.androl.2019.01.004	Q3 IF 2018: 0.294 H Index 2018: 7 Medicine
15	Ivan Miguel Pires, Nuno M. Garcia, Nuno Pombo, Francisco Flórez-Revuelta, Susanna Spinsante and Maria Canavarro Teixeira, "Identification of Activities of Daily Living through Data Fusion on Motion and Magnetic Sensors embedded on Mobile Devices," in Pervasive and Mobile Computing, Elsevier, May 2018 https://doi.org/10.1016/j.pmcj.2018.05.005	Q1 IF 2018: 2.349 H Index 2018: 53 Computer Science
14	Ivan Miguel Pires, Virginie Felizardo, Nuno Pombo, Mario Drobics, Nuno M. Garcia, and Francisco Flórez-Revuelta, "Validation of a method for the estimation of energy expenditure during physical activity using a mobile device accelerometer," in Journal of Ambient Intelligence and Smart Environments, IOS Press, vol. 10(4), pp. 315-326; doi: 10.3233/AIS-180494, August 2018 https://doi.org/10.3233/AIS-180494	Q3 IF 2018: 0.878 H Index 2018: 24 Computer Science
13	Ivan Miguel Pires, Maria Canavarro Teixeira, Nuno Pombo, Nuno M. Garcia, Francisco Flórez-Revuelta, Susanna Spinsante, Rossitza Goleva, Eftim Zdravesvsi, "Android Library for Recognition of Activities of Daily Living: Implementation Considerations, Challenges and Solutions," in The Open Bioinformatics Journal, Benhtam Open, May 2018 https://doi.org/10.2174/1875036201811010061	D1 Scopus CiteScore: 4.86 Computer Science
12	Ivan Pires, Nuno M. Garcia, Nuno Pombo, Francisco Flórez-Revuelta and Susanna Spinsante, "Approach for the Development of a Framework for the Identification of Activities of Daily Living Using Sensors in Mobile Devices," in Sensors, MDPI, 2018, vol. 18(2), pp. 640; doi:10.3390/s18020640, February 2018 https://doi.org/10.3390/s18020640	Q1 IF 2017: 2.677 H Index 2018: 132 Engineering
11	Ivan Miguel Pires, Rui Santos, Nuno Pombo, Nuno Garcia, Francisco Florez-Revuelta, Susanna Spinsante, Rossitza Goleva, Eftim Zdravevski, "Recognition of Activities of Daily Living based on the environmental analysis using audio	Q1 IF 2016: 2.677 H Index 2018: 132

Number	Authors, title, magazine, date of publication, DOI	Publication details
	fingerprinting techniques: a systematic review," in New Trends in Ambient Intelligence Applications, Sensors, MDPI, Sensors, January 2018 https://doi.org/10.3390/s18010160	Computer Science
10	Paula Teixeira, Henrique Pereira, Samuel Monteiro, Graça Esgalhado, Rosa Marina Afonso, Manuel Loureiro, Delfina Ferrão, Nuno Garcia, "A importância dos indicadores biomédicos no funcionamento sexual em adultos portugueses saudáveis (The Importance of Biomedical Indicators in Sexual Functioning in Healthy Portuguese Adults)," in Revista Internacional de Andrologia, Elsevier, January 2018 https://doi.org/10.1016/j.androl.2017.12.005	Q3 IF 2017: 0.261 H Index 2018: 7 Medicine
9	Victor Hugo C. de Albuquerque, Robertas Damaševicius, Nuno M. Garcia, Plácido Rogério Pinheiro, and Pedro P. Rebouças Filho, "Brain Computer Interface Systems for Neurorobotics: Methods and Applications," in BioMed Research International, Hindawi, August 2017 https://doi.org/10.1155/2017/2505493	Q2 IF 2016: 2.476 H Index 2018: 94 Medicine
8	Eftim Zdravevski, Petre Lameski, Vladimir Trajkovik, Andrea Kulakov, Ivan Chorbev, Rossitza Goleva, Nuno Pombo and Nuno Garcia, "Improving Activity Recognition Accuracy in Ambient Assisted Living Systems by Automated Feature Engineering," in IEEE Access, IEEE, March 2017 https://doi.org/10.1109/ACCESS.2017.2684913	Q1 IF 2015: 1.270 H Index 2018: 56 Computer Science
7	Nuno Pombo, Nuno Garcia, Kouamana Bousson, "Classification techniques to predict and/or to detect Apnea: A Systematic Review," in Computer Methods and Programs in Biomedicine, Elsevier, January 2017 https://doi.org/10.1016/j.cmpb.2017.01.001	Q1 IF 2015 1.897 H Index 2018: 83 Computer Science
6	Ivan Miguel Pires, Nuno M. Garcia, Nuno Pombo, Francisco Flórez-Revuelta and Natalia Rodríguez, "Validation Techniques for Sensor Data in Mobile Health Applications," in special issue on Integration of Sensors in Control and Automation Systems, Journal of Sensors, Hindawi, September 2016 https://doi.org/10.1155/2016/2839372	Q2 IF 2015: 0.712 H Index 2018: 31 Engineering
5	Nuno Pombo, Nuno Garcia, Kouamana Bousson, Susanna Spinsante, Ivan Chorbev, "Pain Assessment–Can it be Done with a Computerised System? A Systematic Review and Meta-Analysis," in International Journal of Environmental Research and Public Health (IJERPH), MDPI, April 2016	Q2 IF 2015: 2.035 H Index 2018: 78 Medicine

Number	Authors, title, magazine, date of publication, DOI	Publication details
	https://doi.org/10.3390/ijerph13040415	
4	Ivan Pires, Nuno M. Garcia, Nuno Pombo, Francisco Flórez-Revuelta, "From Data Acquisition to Data Fusion a Comprehensive Review and a Roadmap for the Identification of Activities of Daily Living using Mobile Devices," in Sensors, MDPI, 2016, vol. 16(2), pp. 184, January 2016 https://doi.org/10.3390/s16020184	Q1 IF 2015: 2.033 H Index 2018: 132 Computer Science
3	Paula Sousa, Virginie Felizardo, Daniel Oliveira, Rafael Couto, Nuno M. Garcia, "A Review of Thermal Methods and Technologies for Diabetic Foot Assessment," in Expert Review of Medical Devices, Taylor and Francis, vol. 12(4), pp. 439-48, Epub 2015, April 2015 https://doi.org/10.1586/17434440.2015.1032251	Q2 IF 2015: 1.762 H Index 2018: 55 Engineering
2	Nuno M. Garcia, Paulo P. Monteiro, Mário M Freire, José R. Santos, Przemyslaw Lenkiewicz, "A new architectural approach for optical burst switching networks based on a common control channel," in Optical Switching and Networking, Elsevier, vol. 4, issue 3-4, pp. 173-188, 2007 https://doi.org/10.1016/j.osn.2007.09.001	Q1 IF 2015: 1.137 H Index 2018: 24 Computer Science
1	Paulo Pereira Monteiro, Hélder Luís Castro, Jorge Castro, Ruben Luís, Daniel Fonseca, João Pedro, Lara Pellegrino, Marek Hajduczenia, Sílvia Pato, Nuno M. Garcia, Carlos Santiago, Tiago Silveira, Ana Ferreira, "Optical Communications Research Activities at COM RD1 Siemens S.A.," in Fiber and Integrated Optics, Taylor and Francis, vol. 24, issue 3-4, pp. 395-410, August 2005 https://doi.org/10.1080/01468030590923064	Q3 IF 2015: 0.373 H Index 2018: 24 Materials Science

A graphical overview of the classification of the publications in Magazines or Journals is shown in Figure 17 and Figure 18. It can be seen that 33% of the publications have occurred in 1st quartile magazines / journals, including 4% of papers published in 1st decile magazines / journals, and 85% of the papers being published in 1st and 2nd quartile magazines / journals. Over ¾ of the papers have been published in Computer Science magazines / journals, with a relevant part (27%) of the papers being published in magazines / journals of the area of Medicine or Medicine and Computer Science, which is a key component of the interdisciplinary area of Ambient Assisted Living.

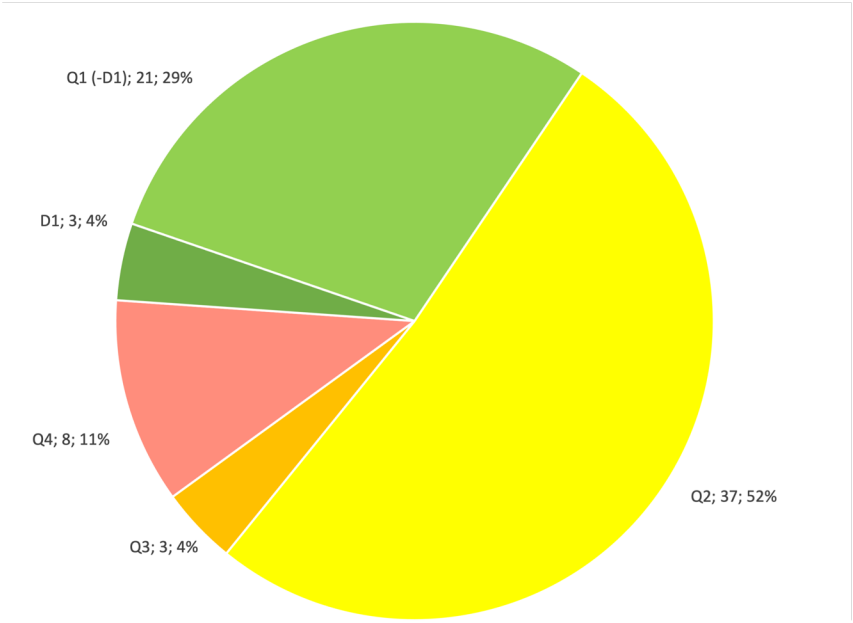

Figure 17 – Published papers per Quartile of the Magazine / Journal (2017-2022).

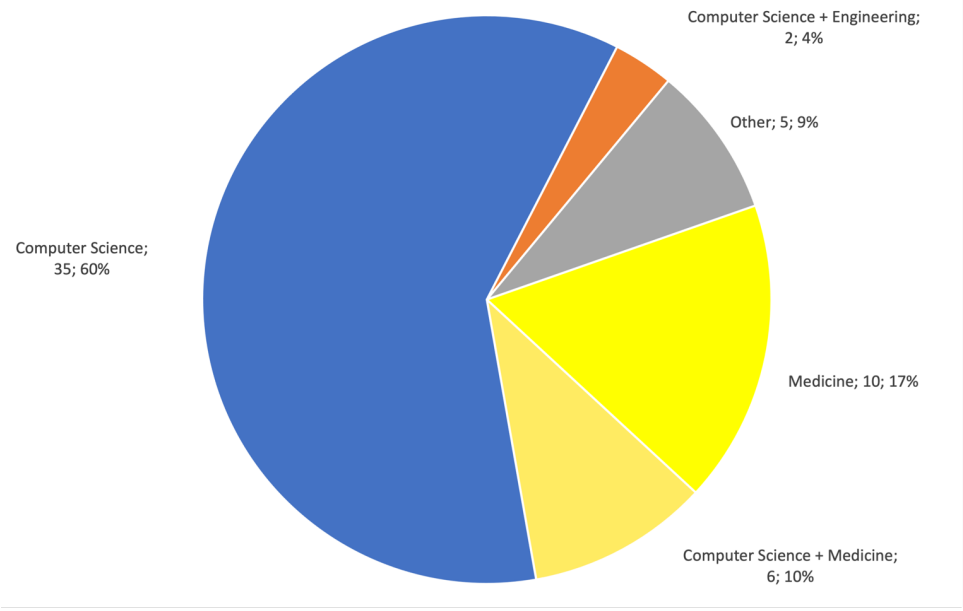

Figure 18 – Published papers per Scientific Area of the Magazine / Journal (2017-2022).

Publication of scientific papers in other peer-reviewed magazines or journals

The following list details the papers published in magazines or journals after peer-reviewing, but at the time of the publication, these magazines / journals were not indexed by any major indexing engine.

5 Luiz Henrique Salazar, Anita Fernandes, Rudimar Dazzi, Nuno Garcia, Valderi R. Q. Leithardt, "Using Different Models of Machine Learning to Predict Attendance at Medical Appointments," Journal of Information Systems Engineering and Management, Volume 5, Issue 4, Article No: em0122

https://doi.org/10.29333/jisem/8430

4 Vasco Ponciano, Ivan Miguel Pires, Fernando Reinaldo Brito, María Vanessa Villasana, Nuno M. Garcia, Valderi Leithardt, "Detection of diseases based on Electrocardiography and Electroencephalography signals embedded in different devices: An exploratory study (*Detecção de doenças baseadas em sinais de eletrocardiografia e eletroencefalografia incorporados em diferentes dispositivos: um estudo exploratório*)," Brazilian Journal of Development, Curitiba, Brazil, v. 6, n.5, p.27212-27231, ISSN 2525-8761, May 2020

http://dx.doi.org/10.34117/bjdv6n5-247

3 Nuno M. Garcia, "*A Importância da Internet Livre e Aberta* (The Importance of a Free and Open Internet)," in *CyberLaw*, Vol. II, pag. 142-167 edited by *CIJIC: Centro de Investigação Jurídica do Ciberespaço, Faculdade de Direito da Universidade de Lisboa*, ISSN 2183-729, June 2016

http://www.cijic.org/wp-content/uploads/2016/06/A-IMPORT--NCIA-DA-INTERNET-LIVRE-E-ABERTA_Nuno-M-Garcia.pdf

2 Virginie Felizardo, Paula Sousa, Daniel Oliveira, Celina Alexandre, Nuno C. Garcia, Nuno M. Garcia, "*TICE.Healthy: Integração de soluções TIC para a "Saúde e Qualidade de Vida"* (TICE.Healthy: Integration of ICT solutions for "Health and Quality of Life")," in *RISTI-revista Ibérica de Sistemas de Tecnologia e Informação*, Nº14, 12/2014

http://dx.doi.org/10.17013/risti.14.17-32

1 Virginie Felizardo, Pedro Dinis Gaspar, Nuno M. Garcia, Victor Reis, "Acquisition of multiple physiological parameters during physical exercise," in International Journal of E-Health and Medical Communications (IJEHMC), vol. 2, issue 4, pp. 37-49, 2011

https://doi.org/10.4018/jehmc.2011100103

Publication of peer-reviewed papers in international conferences

The following list details the papers published in international conferences, after a peer-reviewing stage. The vast majority of the papers address issues related to AAL, or Medical Informatics, or the processing of biosignals. These papers stem from the research carried out at ALLab, often with undergraduate students (*e.g.* papers in lines 74, 68, 60 among others). There are also papers that report research on educational issues, stemming from observations and experiments carried out during teaching activities. Early papers are mostly related to the computer networks scientific area.

86 Ivan Miguel Pires, Vasco Ponciano, and Nuno M. Garcia, "A Brief Analysis of the effects of coffee by Electroencephalography signals", in III International Congress on Sustainable Development, Landscape Planning and Territorial Governance, October 20-21, 2021, Portalegre, Portugal

85 Ivan Miguel Pires, Nuno M. Garcia, and Maria Cristina Canavarro Teixeira, "Mobile Device Approach for the Measurement of Jump Flight Time", in 19th International Conference on Practical Applications of Agents and Multi-Agent Systems, October 6-8, 2021, Salamanca, Spain

84 Vasco Ponciano, Ivan Miguel Pires, Fernando Reinaldo Ribeiro, and Nuno M. Garcia, "Mobile application for Inclusive Tourism", in 6th Iberian Conference on Information Systems and Technologies (CISTI 2021), June 23-26, 2021, Chaves, Portugal

83 Filipe Ferreira, Ivan Miguel Pires, Mónica Costa, Vasco Ponciano, and Nuno M. Garcia, "Approach for the Wound Area Measurement with Technological Devices", in International IoT, Electronics and Mechatronics Conference (IEMTRONICS 2021), April 21-24, 2021, Toronto, Canada

82 Fábio Machado Gil, Nuno M. Garcia, Bárbara Matos, Nuno Pombo, Rossitza Goleva, and Ciprian Dobre, "Identifying Packet Loss and Reordering Packets in Keyed UDP Transmissions," in 2020 IEEE Globecom Workshops (GC Wkshps (pp. 1-5), IEEE, December 2020, IEEE

81 María Vanessa Villasana, Ivan Pires, Juliana Sá, Nuno Garcia, Eftim Zdravesvski, Petre Lameski, Ivan Chorbev, "CoviHealth: A pilot survey of physical activities and nutrition of teenagers in Central Portugal," published in the proceedings of the 7th EAI International Conference on IoT Tecnologies for Healthcare, 2-4 December 2020, Viana do Castelo, Portugal;

80 Ivan Pires, Gonçalo Marques, Nuno Garcia, Vasco Ponciano, "Machine learning for the evaluation of the presence of heart disease," published in the Proceedings of the 10th International Conference on Current and Future Trends of Information and Communication Technologies in Healthcare (ICTH 2020), Madeira, Portugal, 2-5 November 2020

79 Ivan Pires, Gonçalo Marques, Nuno M. Garcia and Eftim Zdravevski, "Identification of Activities of Daily Living through Artificial Intelligence: an accelerometry-based approach," published in the Proceedings of the 15th International Conference on Future Networks and Communications, Leuven, Belgium, 9-12 August 2020

78 Luiz Henrique Salazar, Anita Fernandes, Rudimar Dazzi, Jean Raduenz, Nuno M. Garcia, Valderi Leithardt, "*Predição de Comparecimento às Consultas Médicas com Base em Aprendizagem de Máquina* (Prediction of Attendance at Medical Appointments Based on Machine Learning)," published in the Proceedings of CISTI'2020 - 15ª Conferência Ibérica de Sistemas e Tecnologias de Informação, Sevile, Spain, 24-27 June 2020

77 Jonas Cesconetto, Luís A. Silva, María N. Cáceres, Nuno M. Garcia, Valderi R. Q. Leithardt, "*PRIPRO: Solução para controle e gerenciamento de perfil de usuário com base na privacidade*

de dados," published in the Proceedings of CISTI'2020 - 15ª Conferência Ibérica de Sistemas e Tecnologias de Informação, Sevile, Spain, 24-27 June 2020

76 Sandeep Pirbhulal, Nuno Pombo, Virginie Felizardo, Nuno Garcia, Ali Hassan Sodhro, Subhas Chandra Mukhopadhyay, "Towards Machine Learning Enabled Security Framework for IoT-based Healthcare," in the Proceedings of the 13th International Conference on Sensing Technology - ICST 2019, Sydney, Australia, 2-4 December 2019

75 António Júlio Padez, Madalena Pereira, Nuno Pombo, Nuno M. Garcia, "State of the Art: Ergonomics and modelling of functional clothing products with bio-signals sensor integration," published in the Proceedings of the 2019 International Conference on Engineering (ICEUBI 2019), Covilhã, Portugal, 27-29 November 2019

74 Diandre de Paula, Valderi Leidhardt, Nuno M. Garcia, "Study of a Context Quality Model for UbiPri Middleware," published in the Proceedings of the 2019 International Conference on Engineering (ICEUBI 2019), Covilhã, Portugal, 27-29 November 2019

73 Ana Gouveia, Luís Pires, Nuno Garcia, Ana Barbosa, Ana Jesus, Nuno Pombo, Marta Soares, José Martinez-de-Oliveira, "Breast skin temperature evaluation in lactating and non-lactating women by thermography: an exploratory study," published in the Proceedings of the VII ECCOMAS Thematic Conference on Computational Vision and Medical Image Processing, Oporto, Portugal, 16-18 October 2019

72 Salome Oniani, Ivan Pires, Nuno M Garcia, I. Mosashvili, Nuno Pombo, "A review of frameworks on continuous data acquisition for e-Health and m-Health," published in the Proceedings of the 5th EAI International Conference on Smart Objects and Technologies for Social Good. ACM, 2019, Valencia, Spain, 25-27 September, 2019

71 María Vanessa Villasana, Ivan M. Pires, Juliana Sá, Nuno M. Garcia, N Pombo, "CoviHealth: Novel approach of a mobile application for nutrition and physical activity management for teenagers," published in the Proceedings of the 5th EAI International Conference on Smart Objects and Technologies for Social Good. ACM, Valencia, Spain, 25-27 September, 2019

70 Vasco Ponciano, Ivan M. Pires, F. R. Ribeiro, Nuno M. Garcia, Nuno Pombo, "Smartphone-based automatic measurement of the results of the Timed-Up and Go test," published in the Proceedings of the 5th EAI International Conference on Smart Objects and Technologies for Social Good. ACM, 2019, Valencia, Spain, 25-27 September 2019

69 Lina Xu, Nuno Pombo, Ivan M. Pires, Nuno M. Garcia, "Is the Overfitting in a Neural Network a Reliable Model for the Recognition of Activities of Daily Living?," published in the Proceedings of the 5th EAI International Conference on Smart Objects and Technologies for Social Good. ACM, 2019, Valencia, Spain, 25-27 September 2019

68 J. Moreira, M. Moreira, Nuno Pombo, Bruno Silva, Nuno M. Garcia, N. M., "Identification of Real and Imaginary Movements in EEG Using Machine Learning Models," published in the Proceedings of the International Conference on Medical and Biological Engineering, pp. 469-474, Springer, Banja Luka, Bosnia and Herzegovina, 16–18 May 2019

67 Nuno Pombo, Nuno M. Garcia, "Towards Pain-Fingerprinting: A Ubiquitous and Interoperable Clinical Decision Support System for Pain Assessment," published in the Proceedings of the International Conference on Medical and Biological Engineering, pp. 453-457, Springer, Banja Luka, Bosnia and Herzegovina, 16–18 May 2019

66 Melaku Girma, Nuno Garcia, Mesfin Kifle, "Agile Scrum Scaling Practices for Large Scale Software Development," published in the Proceedings of the 4th International Conference on Information Systems Engineering (ICISE 2019), Shanghai, China, 4-6 May 2019

65 Nuno Pombo, Nuno Garcia, Pedro Alves, "How to Get a Badge? Unlock Your Mind," published in the Proceedings of EDUCON2019 – IEEE Global Engineering Education Conference, Dubai, UAE, 9-11 April 2019

64 Aleksandar Jevremovic, Sladjana Arsic, Milos Antonijeic, Andri Ioannou, Nuno Garcia, "Human-Computer Interaction Monitoring and Analytics Platform - Wisconsin Card Sorting Test Application," published in the Proceedings of HealthyIoT 2018, the 5th EAI International Conference on IoT Technologies for HealthCare, Guimarães, Portugal, 21-23 November 2018

63 Faisal Hussain, Muhammad Basit Umair, Muhammad Ehatisham-ul-Haq, Ivan Miguel Pires, Tânia Valente, Nuno M. Garcia, Nuno Pombo, "An Efficient Machine Learning-based Elderly Fall Detection Algorithm," published in the Proceedings of The Ninth International Conference on Sensor Device Technologies and Applications SENSORDEVICES 2018, Venice, Italy, 16-20 September 2018

62 Salome Oniani, Sandra Woolley, Ivan M. Pires, Nuno M. Garcia, Tim Collins, Sean Ledger, Anand Pandyan, "Reliability Assessment of New and Updated Consumer-Grade Activity and Heart Rate Monitors," published in the Proceedings of The Ninth International Conference on Sensor Device Technologies and Applications SENSORDEVICES 2018, Venice, Italy, 16-20 September 2018

61 Ivan Miguel Pires, Nuno M. Garcia, Nuno Pombo, Salome Oniani, Ia Mosashvili, Gisele Ferreira de Souza, "What Do We Mean about the Validation of the Activity Monitoring Devices?," published in the Proceedings of The Ninth International Conference on Sensor Device Technologies and Applications SENSORDEVICES 2018, Venice, Italy, 16-20 September 2018

60 Tânia Valente, Ivan Miguel Pires, Nuno M. Garcia, Nuno Pombo, João Orvalho, "Hydriney: A Mobile Application to Help in the Control of Kidney Stones Disease," published in the Proceedings of The Ninth International Conference on Sensor Device Technologies and Applications SENSORDEVICES 2018, Venice, Italy, 16-20 September 2018

59 Ivan Miguel Pires, Nuno M. Garcia, Nuno Pombo, Francisco Flórez-Revuelta, "Framework for the Recognition of Activities of Daily Living and their Environments in the Development of a Personal Digital Life Coach," published in the Proceedings of DATA 2018, the 7th International Conference on Data Science, Technologies and Applications, Oporto, Portugal, 26-28 July 2018

58 Mesfin Workineh, Nuno M. Garcia, Dida Midekso, "Cloud Adoption Readiness Assessment Framework for Small and Medium Enterprises in Developing Economies: Evidential Reasoning Approach," published in the Proceedings of ICSOFT 2018, the 13th International Conference on Software Technologies, Oporto, Portugal, 26-28 July 2018

57 Ivan M. Pires, Nuno Pombo, Nuno M. Garcia, Francisco Flórez-Revuelta, "Multi-Sensor Mobile Platform for the Recognition of Activities of Daily Living and their Environments based on Artificial Neural Networks," published in the Proceedings of the 27th International Joint Conference on Artificial Intelligence and the 23rd European Conference on Artificial Intelligence (IJCAI-18) IJCAI, pp. 5850-5852, Stockholm, Sweden, 13-19 July 2018

56 Joannis Gialelis, P. Pavlou, Christos Panagiotou, Nuno Pombo, Nuno Garcia, "Unobtrusive System for the Detection of Mental Focus Depletion," published in the Proceedings of the 10th International Conference on e-Health, Madrid, Spain, 17-19 July 2018

55 Ivan Miguel Pires, Tânia Valente, Nuno Pombo, Nuno M. Garcia, "Conceptual Definition of a Platform for the Monitoring of the Subjects with Nephrolithiasis Based on the Energy Expenditure and the Activities of Daily Living Performed," published in the Proceedings of the 16th International Conference on Practical Applications of Agents and Multi-Agent Systems, Toledo, Spain, 20-22 June 2018

54 Diogo L. Marques, Ivan M. Pires, João F. Farias, Maria M. Barbosa, Sara I. Alvarinhas, Nuno M. Garcia, Mário C. Marques, "Validation of a Method to Determine the Reaction Time in the 30-s Chair Stand Test in Elderly People," published in the Proceedings of AGEING CONGRESS 2018 – *Congresso Internacional sobre o Envelhecimento*, Coimbra, Portugal, 27-29 May 2018

53 Ivan Miguel Pires, Diogo Marques, Nuno Pombo, Nuno M. Garcia, Mário C. Marques and Francisco Flórez-Revuelta, "Measurement of the Reaction Time in the 30-S Chair Stand Test using the Accelerometer Sensor Available in off-the-Shelf Mobile Devices," published in the Proceedings of the ICT4AWE 2018 4th International Conference on Information and Communication Technologies for Ageing Well and e-Health, Madeira, Portugal, 22-23 March 2018

52 Ivan Miguel Pires, Nuno M. Garcia, Nuno Pombo and Francisco Flórez-Revuelta, "Limitations of the Use of Mobile Devices and Smart Environments for the Monitoring of Ageing People," published in the Proceedings of the ICT4AWE 2018 4th International Conference on Information and Communication Technologies for Ageing Well and e-Health, Funchal, Madeira, Portugal, 22-23 March 2018

51 Igor Matias, Nuno Pombo, Nuno Garcia, “Towards a fully automated bracelet for health emergency solution,” published in the Proceedings of the IoTBDS 3th International Conference on Internet of Things, Big Data and Security, Funchal, Madeira, Portugal, 19-21 March 2018

50 Igor Matias, Nuno Pombo, Nuno Garcia, David Lamas, Vladimir Tomberg, “Scaffolding Students on Connecting STEM and Interaction Design,” published in the Proceedings of the IEEE EDUCON Global Engineering Education Conference, Santa Cruz de Tenerife, Canarias, Spain, 17-20 April 2018

49 Ana Rita Reigones, Pedro Dinis Gaspar, Nuno M. Garcia, “Information and communications technologies & electronics (ICTE)-based livestock biosignals monitoring system,” published in the Proceedings of the International Congress on Engineering, University of Beira Interior, Covilhã, Portugal, 5-7 December 2017

48 Mesfin Workineh, Nuno M. Garcia, Dida Midekso, “Cloud Computing as Technological Solutions for Higher Education Institutions: Adoption Readiness Assessment Model,” published in the Proceedings of the IEEE International Conference on Computing Networking and Informatics, Lagos, Nigeria, 29-31 October 2017

47 Nuno Pombo, Nuno Garcia, Miguel Castelo-Branco, “Simulation in Medical School Education,” published in the Proceedings of the 14th AAATE Congress, Sheffield, United Kingdom, 12-15 September 2017

46 Ivan Pires, Virginie Felizardo, Nuno Pombo, Nuno M. Garcia, “Limitations of energy expenditure calculation based on a mobile phone accelerometer,” published in the Proceedings of the International Conference on High Performance Computing & Simulation (HPCS 2017), Genova, Italy, 17-21 July 2017

45 Milos Drutarovsky, Dusan Kocur, Maria Svecova, Nuno M Garcia, “Real-time wireless UWB sensor network for person monitoring,” published in the Proceedings of the 14th International Conference on Telecommunications (ConTEL) (pp. 19-26). IEEE, June 2017

44 Mesfin Workineh, Nuno M. Garcia and Dida Midekso, “Cloud Suitability Assessment Method for Application Software,” published in the Proceedings of the 7th International Conference on Cloud Computing and Services Science (CLOSER 2017), Oporto, Portugal, 24-26 Abril 2017

43 Sandra Reis, Virginie Felizardo, Nuno Pombo, Nuno Garcia, “Elderly mobility analysis during Timed Up and Go test using biosignals,” published in the Proceedings of the International Conference on Software Development and Technologies for Enhancing Accessibility and Fighting Info-exclusion, special track Emergent Technologies For Ambient Assisted Living (ETAAL), Vila Real, Portugal, 1-3 December 2016

42 Inês Alexandre, Virginie Felizardo, Nuno Pombo, Nuno Garcia, “Contribution of Biosignals for Emotional Analysis on Image Perception,” published in the Proceedings of the 2nd IET

International Conference on Technologies for Active and Assisted Living (TechAAL 2016), London, England, 24 October 2016

41 Nuno Pombo, Nuno M. Garcia, "ubiSleep: An Ubiquitous Sensor System for Sleep Monitoring," published in the Proceedings of the *12th* International Conference on Wireless and Mobile Computing, Networking and Communications (WiMOB), New York, United States of America, 17-19 October 2016

40 André Pinho, Nuno Pombo, Nuno M. Garcia, "Sleep Apnea Detection Using a Feed-Forward Neural Network on ECG Signal," published in the Proceedings of the 2016 IEEE 18th International Conference on e-Health Networking, Applications and Services (Healthcom), Munich, Germany, 14-17 September 2016

39 André Pinto, Gil Dias, Virginie Felizardo, Nuno Pombo, Hugo Silva, Paulo Fazendeiro, Rute Crisóstomo and Nuno Garcia, "Electrocardiography, Electromyography, and Accelerometry Signals Collected with BITalino While Swimming: Device Assembly and Preliminary Results," published in the Proceedings of the 2016 IEEE 12th International Conference on Intelligent Computer Communication and Processing (ICCP 2016), special session International Workshop on Enhanced Living EnvironMENTs, ELEMENT-2016, Cluj-Napoca, Romania, 8 September 2016

38 Nuno Pombo, Nuno M. Garcia, Kouamana Bousson, "A Data Fusion Model to Evaluate Computerized Pain Diaries on Anxiety and Depression Assessment," published in the Proceedings of the 4th International Black Sea Conference on Communications and Networking, Varna, Bulgaria, 6-9 June 2016

37 Ivan Pires, Nuno M. Garcia, Nuno Pombo, Francisco Flórez-Revuelta, "Identification of Activities of Daily Living using Sensors Available in Off-the-shelf Mobile Devices: Research and Hypothesis," published in the Proceedings of the 7th International Conference on Ambient Intelligence, Seville, Spain, 1-3 June 2016

36 Virginie Felizardo, Hugo Rodrigues, Nuno C. Garcia, Celina Alexandre, Daniel Oliveira, Paula Sousa, Nuno M. Garcia and Nuno Pombo, "Metabolic.Care: a novel solution based on a thermography for detection of diabetic foot," published in the Proceedings of the 7th International Conference on Ambient Intelligence, Seville, Spain, 1-3 June 2016

35 Yahaya Coulibaly, Muhammad Shafie Abd Latiff, Abubakar Muhammad Umaru and Nuno M. Garcia, "QoS Performance Analysis of Non-slotted and Slotted Optical Burst Switched Networks," published in the Proceedings of the 2015 IEEE 12th Malaysia International Conference on Communications (MICC), Kuching, Sarawak, Malaysia, 23-25 November 2015

34 Nuno M. Garcia, Micael Santos, Nuno Pombo, João Redol, Susanna Spinsante, "Differential image analysis using Shannon's entropy: preliminary results," published in the Proceedings of the 7th

International Conference covering topics in ICT Innovations, Ohrid, R. Macedonia, 1-4 October 2015

33 Nuno Pombo, Susanna Spinsante, Carlos Chiatti, Paolo Olivetti, Ennio Gambi, Nuno Garcia, "Assistive Technologies for Homecare: Outcomes from Trial Experiences," published in the Proceedings of the 7th International Conference covering topics in ICT Innovations, Ohrid, R. Macedonia, 1-4 October 2015

32 Nuno M. Garcia, "A roadmap to the design of a personal digital life coach," published in the Proceedings of the *7th International Conference covering topics in ICT* Innovations, Ohrid, R. Macedonia, 1-4 October 2015

31 Ivan Miguel Pires, Nuno M. Garcia and Francisco Flórez-Revuelta, "Multi-sensor data fusion techniques for the identification of activities of daily living using mobile devices," published in the Proceedings of the ECMLPKDD 2015 Doctoral Consortium, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, Porto, Portugal, 7-11 September 2015

30 Diana Oliveira, Daniel Oliveira, Graça Esgalhado, Nuno M. Garcia, "Psychometric Study of a Questionnaire for Academic Study Processes of Portuguese College Students," published in the Proceedings of the *CSEDU 2015*, the International Conference on Computer Supported Education, Lisbon, Portugal, 23-25 May 2015

29 Ivan Miguel Pires, Márcia Andrade, Nuno M. Garcia, Rute Crisóstomo, Francisco Flórez-Revuelta, "Measurement of Heel-Rise Test Results using a Mobile Device," published in the Proceedings of the PhyCS 2015, 2nd International Conference on Physiological Computing Systems, Angers, France, 11-13 February 2015

28 Ivan Miguel Pires, Nuno M. Garcia, Maria Cristina Canavarro Teixeira, "Calculation of Jump Flight Time using a Mobile Device," published in the Proceedings of the HEALTHINF 2015 8th International Conference on Health Informatics, Lisbon, Portugal, 12-15 January 2015

27 Ivan Miguel Pires, Nuno M. Garcia, "Wound Area Assessment using Mobile Application," published in the Proceedings of the BIODEVICES 2015, 8th International Conference on Biomedical Electronics and Devices, Lisbon, Portugal, 12-15 January 2015

26 Diana Oliveira, Graça Esgalhado, Daniel Oliveira, Nuno M. Garcia, "Psychometric Study of a Scale for Academic Self-Efficacy Assessment Among Portuguese College Students," published in the Proceedings of the ICERI 2014, 7th International Conference of Education, Research and Innovation, Seville, Spain, 17-19 November 2014

25 Daniel Oliveira, Diana Oliveira, Nuno M. Garcia, Graça Esgalhado, "An Off-the-Shelf Platform for Automatic and Interactive Text Messaging Using Short Message Service," published in the Proceedings of the 13th International Conference on Computer Information Systems and

Industrial Management Applications (CISIM2014), Ton Duc Thang University, Ho Chi Minh City, Vietnam, 5-7 November 2014

24 Daniel Oliveira, Paula Sousa, Virginie Felizardo, Nuno C. Garcia, Celina Alexandre, Nuno M. Garcia, "Metabolic.Care A hardware and software platform to monitor and assess diabetic foot condition," published in the Proceedings of the 2014 IEEE 16th International Conference on e-Health Networking, Applications and Services (Healthcom), Natal, Brazil, 15-18 October 2014

23 Nuno Pombo, Nuno Garcia, Virginie Felizardo, Kouamana Bousson, "Big Data Reduction Using Radial Basis Function Neural Network: A Predictive Model for ECG Waveform," published in the Proceedings of the 2014 IEEE 16th International Conference on e-Health Networking, Applications and Services (Healthcom), Natal, Brazil, 15-18 October 2014

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Proceedings of the IEEE Symposium on Computers and Communications (ISCC'07, Aveiro, Portugal), 1-4 July 2007

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3 Nuno M. Garcia, Paulo P. Monteiro, Mário M. Freire, José M. Santos, "A New Architecture for Optical Burst Switched Networks Based on a Common Control Channel," published in the Proceedings of the International Conference on Networking ICN'06, Mauritius Islands, 23-26 April 2006

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Publication of peer-reviewed papers in national conferences

2 Nuno Miguel Carvalho Galego, Nuno M Garcia, "*Desafios de segurança numa transição de IPv4 para IPv6*," published in the Proceedings of the Atas da Conferência da Associação Portuguesa de Sistemas de Informação, vol. 16, Issue 16, pp. 003-015, 13 February 2017

1 Isabel Trindade, Madalena Pereira, R. Salvado, José Lucas, Nuno M. Garcia, José Santos Silva, Rui Miguel, "Intelligent clothing for health care," published in the Proceedings of the Symposium Innovative Materials and Processes, UBI, Covilhã, Portugal, 2010

Other publications

Publications in web pages

He has authored three entries at the online encyclopaedia www.techopedia.com on:

3 "Optical Burst Switching" (available at http://www.techopedia.com/definition/25332/optical-burst-switching-obs), 2014;

2 "Optical Packet Switching" (available at http://www.techopedia.com/definition/27135/optical-circuit-switching-ocs), 2014;

1 "Wavelength Division Multiplexing" (available at http://www.techopedia.com/definition/3451/wavelength-division-multiplexing-wdm), 2014.

Published reviews on books, and on scientific papers published in magazines, journals and conference proceedings

Since 2006, he has published in Computing Reviews.com, an Association for Computing Machinery (ACM) associated web site over 15 peer-reviewed reviews on books and scientific papers.

Bibliometry

The number of citations of a scholar is one of the most important metrics to assess the impact his/her publications have in the opinion of other researchers and is therefore considered one of the most important validation criteria for a publishing scientist. Nevertheless, there is published research that stresses that citations should not be the only criteria for the assessment of quality of the scientific work. There have been reported cases of authors that are so prolific that their metrics are plainly impossible to achieve in normal scenarios.

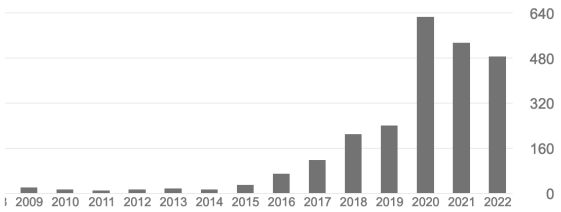

Figure 19 – Number of citations per year according to Google Scholar as of 16 October 2022.

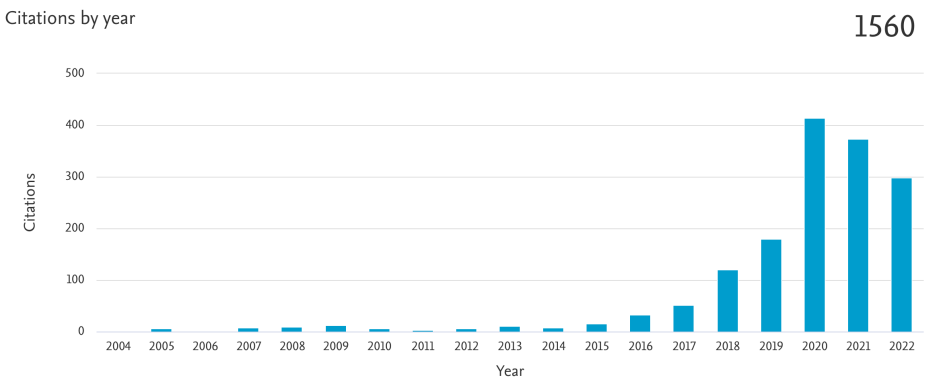

Figure 20 – Number of citations per year according to Scopus as of 16 October 2022.

Google Scholar reports a total of 2477 citations since 2005; before that date, the author had no publications. Figure 19 shows the evolution of the number of citations according to Google Scholar. Google Scholar also reports a h-Index of 26 and a i10-index of 77. The link to the author profile in Google Scholar is https://scholar.google.pt/citations?user=eCOZ3t8AAAAJ&hl=en .

Scopus reports a h-Index of 21 and 1560 citations; the evolution of number of citations per year can be seen in Figure 20 (https://www.scopus.com/authid/detail.uri?authorId=8229776000).

3.2 Part B- 2) Coordination and participation in scientific projects

Coordination of funded scientific projects

Since 2010, he has participated as Principal Investigator, Coordinator, Local Coordinator or Researcher of several European or national Research projects. The approval ratios for the different ERASMUS+ projects are around 10% and for the COST Action are around 5%, according to the last reported data. The ratios of approval for other types of projects are not known or not yet known.

The funds he directly managed for these projects **surpasses the 5.8 M€.**

In a summary, for the two research groups, a total of 25 projects have been or are managed, of them, 11 as Principal Investigator, and 14 as Coordinator of the research team at UBI.

The list of projects in presented in two tables, divided by Laboratory. The funds managed by ALLab sum up to almost 1.5 M€, and the funds managed by BSAFE Lab sum more than 4,3 M€. The presented figures in the following tables are rounded to the thousands of Euros, yet the complete financial information is available at request.

The projects associated with ALLab are shown in Table 14. The first column serves as an overall counter for the number of projects, the second column has data relative to the project, including date span (or year of activity), funding entity, name of the project and involved partners. The third column shows

the total and local budgets ("n/a" standing for "not available" or "not applicable").

The list of projects associated with BSAFE Lab are shown in Table 15. The first column serves as a counter for the number of projects, the second column has data relative to the project, including date span (or year of activity), funding entity, name of the project and involved partners. The third column shows the total and local budgets ("n/a" standing for "not available" or "not applicable").

Table 14 – Coordinated projects in the context of ALLab.

#	**Project description**	**Total and UBI budgets (T and UBI) per project**
25	June 2020 – June 2022: Local Coordinator of the project funded by the ***Instituto de Telecomunicações*** (competitive call) Predict and Reason about Hypoglycaemia in an App (DiaPreReApp). Project partners: UBI and the University of Porto (PT)	T: 30 K€ UBI: 15 K€
24	December 2019 – November 2023: Local Coordinator, Researcher and General Data Manager of the **Horizon 2020** – Research and Innovation Framework Programme, project PHArA-ON, Pilots for Active and Healthy Ageing; 41 partners involved	T: 21.5 M€ UBI: 404 K€
23	January 2019 – December 2021: Local Coordinator of the **Cloud Computing Competence Centre - C4** project "Passing Cloud," funded by *Sistema4 de Apoio à Investigação Científica e Tecnológica – Programas Integrados de IC&DT*, by the Portugal 2020 Program, and in the framework of the Regional Operational Program of the Centre, and the European Union *Fundo de Desenvolvimento Regional (FEDER)*	T: n/a UBI: 51 K€
22	January 2019 – December 2021: Local Coordinator of the **Cloud Computing Competence Centre - C4** project "Predictive Algorithms for Health," funded by *Sistema de Apoio à Investigação Científica e Tecnológica – Programas Integrados de IC&DT*, by the Portugal 2020 Program, and in the framework of the Regional Operational Program of the Centre, and the European Union *Fundo de Desenvolvimento Regional (FEDER)*	T: n/a UBI: 51 K€
21	November 2013-November 2017: Chair (elected) of the **COST Action** IC1303- "Architectures, Algorithms and Platforms for Enhanced Living Environments (AAPELE)," funded by the COST Office through the European Science Foundation and starting in 2015, funded by the COST Association through the European Commission Horizon 2020 program; http://www.cost.eu/domains_actions/ict/Actions/IC1303?management	T: 650 K€ UBI: n/a

#	Project description	Total and UBI budgets (T and UBI) per project
20	2012 - 2014: Researcher and Project Coordinator of the **QREN** project EyeSee, Blending Seamlessly Advertising in Video (National QREN project lead by EyeSee Lda, Lisbon)	T: n/a UBI: 150 K€
19	2011 - 2014: Researcher and Project Coordinator of the **TICE**-Healthy, (National project number 13842)	T: 6.7 M€ UBI: 160 K€
18	2010: Main Researcher of the CIFANG - Research on Communication, Information Framework and Algorithms for Physiological Signals on Next-Generation Networks, (*Instituto de Telecomunicações* internal project)	T: 6 K€
17	2008 – today: Main Researcher / Senior Researcher of the internal project PC246 at the *Instituto de Telecomunicações*	T: 51 K€

Table 15 – Coordinated projects in the context of BSAFE Lab.

#	Project description	Total and UBI budgets (T and UBI) per project
16	November 2022 – October 2025: Project Coordinator **ERASMUS+ KA2** project Law enforcement and community cooperation and training approach to prevent radicalisation by ensuring refugees' successful inclusion (IN2PREV). Project partners: BSAFE Lab – *Universidade da Beira Interior* (PT), IPS_Innovative Prison Systems (PT), Polish Platform for Homeland Security (PL), *Fundacion Euroarabe de Altos Estudios* (ES), European Association for Social Innovation (RO), General Police Inspectorate of the Ministry of Internal Affairs of the Republic of Moldova (MO), Bureau of Migration and Asylum (MO), Center for **Security** Studies, Bosnia and Herzegovina (BH), Academy of the Police Force in Bratislava (SK)	T: 356 K€ UBI: 62 K€
15	November 2021 – May 2024: Project Coordinator **ERASMUS+ KA2** project Visualising the Future Through Training (VISION). Project Partners: BSAFE LAB – *Universidade da Beira Interior* (PT), IPS_Innovative Prison Systems (PT), CPJ - *Centro Protocolar de Formação Profissional para o Sector da Justiça* (PT), Athens Lifelong Learning Institute (GR), *Centre d'Iniciatives per a la Reinserció* (ES), *Penitenciarul Iasi* (RO), *Lycee Charles Et Adrien Dupuy* (FR*), Istituto Religioso di Formazione e Istruzione Professionale* (IT)	T: 400 K€ UBI: 59 K€

#	Project description	Total and UBI budgets (T and UBI) per project
14	November 2021 – May 2024: Local Coordinator **ERASMUS+ KA2** project Social Practitioners' Stress Relief (4LessBurnout). Project Partners: *Afeji Hauts-de-France* (FR, leader of the project), BSAFE LAB – *Universidade da Beira Interior* (PT), Redial Partnership CLG (IE), European Association for Social Innovation (RO), *APROXIMAR – Cooperativa de Solidariedade Social, CRL* (PT), *Asociatia Centrul de Cercetare si Formare a Universitatii de Nord Baia Mar*e (RO), Athens Lifelong Learning Institute - Civil Non Profit Organisation (GR)	T: n/a UBI: 38 K€
13	November 2021 – May 2024: Local Coordinator **ERASMUS+ KA2** project Training Platform on the Prevention of Emotional and Sexual Abuse Among Youth (PREVEX). Project Partners: *Association les Militants des Savoirs* (Fr, Leader of the project), BSAFE LAB – *Universidade da Beira Interior* (PT), *Universitá Ta Malta* (MT), *Universidad Rey Juan Carlos* (ES), *Universita della Calabria* (IT), *Université de Lille* (FR), *Fachhochschule Salzburg GmbH* (A), IPS_Innovative Prison Systems (PT)	T: n/d K€ UBI: 32 K€
12	December 2019 – November 2022: Project Coordinator of the **ERASMUS+ KA2** project Leadership development for occupational stress reduction in correctional settings (LEADCOR). Project partners: BSAFE LAB – *Universidade da Beira Interior* – UBI (PT), IPS_Innovative Prison Systems (PT), Bremen Senate of Justice and Constitution (DE), *Penitenciarul Baia Mare* (RO), *Sindicatul National al Lucratorilor de Penitenciare* (RO), *Sindicato Nacional do Corpo da Guarda Prisional* (PT), *De Federale Overheidsdienst Justitie - Le Service Public Federal Justice* (BE), *Direção-Geral de Reinserção e Serviços Prisionais* (PT)	T: 351 K€ UBI: 73 K€
11	November 2019 – October 2022: Project Coordinator, **European Comission's KA2** - Cooperation for innovation and exchange of good practices, PO 21_Prison Officers for the 21st Century, Project Coordinator. Project partners: *Universidade da Beira Interior* (PT), Bremen Senate of Justice and Constitution (DE), *De Federale Overheidsdienst Justitie - Le Service Public Federal Justice*, European Organisation Of Prison And Correctional Services (Europris) (NL), Stichting Foundation ICPA Office in Europe (NL), *Direção-Geral de Reinserção e Serviços Prisionais* (PT), Qualify Just - IT Solutions and Consulting Lda (PT), *Sindicato Nacional do Corpo da Guarda Prisional* (PT), *Sindicatul National Al Lucratorilor De Penitenciare* (RO)	T: 900 K€ UBI: 126 K€
10	April 2019 – March 2022: Project Coordinator **European Commission's DG Justice**, R4JUST - Radicalisation Prevention Competence Development Programme for Justice Professionals. Project partners: Universidade da Beira	T: 733 K€ UBI: 71 K€

#	Project description	Total and UBI budgets (T and UBI) per project
	Interior (PT), Qualify Just - IT Solutions and Consulting Lda (PT), Direção-geral de Reinserção e Servicos Prisionais (PT), Hochschule Fur Offentliche Verwaltung (DE), Bremen Senate Of Justice And Constitution (DE), Fondazione Agenfor International (IT), De Federale Overheidsdienst Justitie - Le Service Public Federal Justice (BE), Universitatea De Vest Din Timisoara (RO), Penitenciarul Bucuresti-jilava (RO), Stichting Foundation ICPA Office in Europe (NL)	
9	February 2019-January 2021: Local Coordinator; **ERASMUS+** project CodingOut Coding in prison as a valuable outside tool for employment; Project Leader: Asociacion de Industrias de Conocimiento Y Tecnologia - Gaia - Euskalherriko Ezagutza Eta Teknologia Industrien Elkartea (ES)	T: 223 K€ UBI: 34 K€
8	October 2018-March 2021: Local Coordinator; **ERASMUS+** project AWARE cross-sectoral awareness building on mental health needs in the criminal justice system and on release (Project 2018-1-DE02-KA204-005144); Project Leader: Bremen Ministry of Justice (DE)	T: 349 K€ UBI: 36 K€
7	December 2018-November 2020: Local Coordinator; **ERASMUS+** project WAYOUT – Integrated Exit Programme for Prison and Probation; Project Leader: University of Toulouse Jean Jaurès (FR)	T: 698 K€ UBI: 63 K€
6	January 2019-December 2021: Local Coordinator; **ERASMUS+** project ActiveGames4Change – Sports and Physical Activity Learning Environment for Citizenship, Emotional, Social e-Competences; Project Leader: *University of Gloucestershire* (UK)	T: 597 K€ UBI: 51 K€
5	September 2016-August 2019: Local Coordinator, **ERASMUS+** project MenACE "Mental health, aging and palliative care in European prisons," lead by *Hospice Casa Sperantei* (RO)	T: 290 K€ UBI: 41 K€
4	November 2015-October 2018: Principal Investigator, Project Coordinator, Local Coordinator of **ERASMUS+ FORWARD LOOKING** project EIGEP "European Interaction Guidelines for Education Professionals when working with Children in Juvenile Justice Learning Contexts," partners include *Universidade da Beira Interior* (PT), IPS Innovative Prison Systems Lda (PT), *Centrul Pentru Promovarea Invatarii Permanente* (RO), *Administratia Nationala a Penitenciarelor* (RO), *Psichologinės paramos ir konsultavimo centras* (LT), TITAN (UK)	T: 524 K€ UBI: 74 K€

#	Project description	Total and UBI budgets (T and UBI) per project
3	July 2015-July 2018: Principal Investigator, Project Coordinator, Local Coordinator of **ERASMUS+** project R2PRIS "Radicalization Prevention in Prisons," partners include *Universidade da Beira Interior*, Portugal, IPS Innovative Prison Systems Lda, Portugal, *Ceza Ve Tevkifevleri Genel Mudurlugu,* Turkey, European Organisation of Prison and Correctional Services (EuroPris), Nederlands, *Kriminalomsorgen Directorate* of Norwegian Correctional Service, Norway, *Service Public Fédéral Justice,* Belgium, *Administratia Nationala a Penitenciarelor*, Romania, *Centrul Român de Studii Penitenciare*, Universitatea De Vest Din Timisoara, Romania, and International Correction and Prison Association, Belgium	T: 331K€ UBI: 48K€
2	September 2014-September 2017: Principal Investigator, Project Coordinator, Local Coordinator of **ERASMUS+** project ECOPRIS "Ecological Economics in Prison Work Administration," partners include *Universidade da Beira Interior*, Portugal, *Penitenciarul Timisoara*, Romania, *Centrul Pentru Promovarea Invatarii Permanente*, Romania, Qualify Just - IT Solutions and Consulting Lda, Portugal, *Universitatea De Vest Din Timisoara*, Romania, Ceza *Ve Tevkifevleri Genel Mudurlugu,* Turkey, European Organisation of Prison and Correctional Services (EuroPris), Nederlands and *Direção-Geral de Reinserção e Serviços Prisionais*, Portugal	T: 342 K€ UBI: 47 K€
1	September 2014-September 2017: Local Coordinator, **ERASMUS+** project IDECOM "Innovation, Development and Communication for a better education in Prison System," lead by Penitenciarul Timisoara, Romania	T: 301 K€ UBI 43 K€

Figure 21 shows the weight of the sources of the funds directly managed by the author by type of project, for the two research groups. The values shown are rounded to thousands of Euros, and the relative weight of the funding is shown as a percentage. The data depicted in shades of blue correspond to funds managed in the context of BSAFE Lab, the items in shades of brown correspond to funds managed in the context of ALLab.

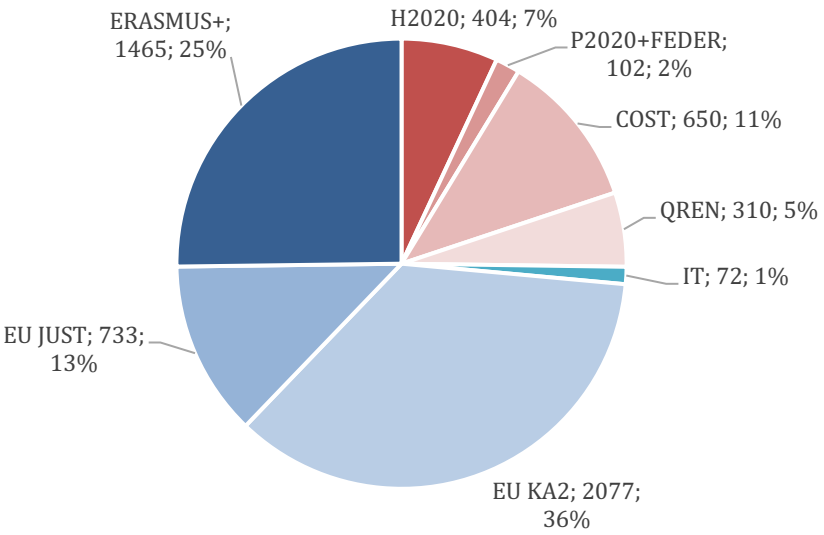

Figure 21 – Sources of funding directly managed by the author per funding entity (source, values in K€, ratio).

Participation in funded scientific projects

Since 2000, he has participated or is participating as Researcher of several European or national scientific research projects funded through competitive calls. The list of projects is shown in Table 16. The first column serves as a counter for the number of projects, the second column has data relative to the project, including date span (or year of activity), funding entity, name of the project and involved partners.

Table 16 – Participation in projects as researcher.

#	**Project description**
25	2019 – 2023: The Global Digital Human Rights Network (GDHRNet) COST Action CA19143 (no budget data available)
24	2016 – 20021: SHELD COST Action CA16226 Indoor living space improvement: Smart Habitat for the Elderly (no budget data available)
23	April 2020 – March 2024: Researcher at the P2020 NomaVoy – Nomad Voyager , funded by the Portuguese Agência Nacional da Inovação. Overall budget 884K€, UBI budget 288K€
22	April 2020 – March 2024: Researcher at the P2020 miraASSETS - Sistema de gestão estrutural de ativos industriais , funded by the Portuguese Agência Nacional da Inovação. Overall budget 647K€, UBI budget 361K€
21	April 2020 – March 2024: Researcher at the P2020 HORUS360 - HORUS 360o iOMS intelligent Offender Management System , funded by the Portuguese Agência Nacional da Inovação. Overall budget 1.6M€, UBI budget 423K€

#	Project description
20	January 2021 – December 2024: Researcher at the P2020 project HopeCare, funded by the Portuguese *Agência Nacional da Inovação*. Overall budget 547K€, UBI budget 95K€
20	September 2020 – August 2021: WP1 Leader in the project CASPER2 - Children Agents for Secure and Privacy Enhanced Reaction, funded by **Next Generation Internet** 2st Open Call; managed budget: 18 K€
19	May 2020-May 2024: by appointment of the Portuguese Minister of Education and Science, representative of Portugal in the **COST Action** "Global Digital Human Rights Network" (GDHRNet) CA 19143, funded by the COST Association through the European Commission Horizon 2020 Programme
18	September 2019 – August 2020: WP1 Leader in the project CASPER - Children Agents for Secure and Privacy Enhanced Reaction, funded by **Next Generation Internet** 1st Open Call; managed budget: 18 K€
17	October 2017-October 2021: by appointment of the Portuguese Minister of Education and Science, representative of Portugal in the **COST Action** "Indoor living space improvement: Smart Habitat for the Elderly" (SHELD-ON) CA16226, funded by the COST Association through the European Commission Horizon 2020 Programme
16	January 2017-February 2017: Invited Researcher at the PIMRA *Procedure Innovative per il Monitoraggio Remoto della Attività motoria e cardiovascolare di soggetti in terapia riabilitativa a seguito di un incidente cardiovascolare, in ambiente ambulatoriale o domestic* (Innovative procedures for remote monitoring of motor and cardiovascular activities of subjects in rehabilitation therapy following a cardiovascular accident, at home or in an outpatient environment), Principal Investigator Dr. Ennio Gambi, ***Università Politecnica delle Marche***, Ancona, Italy
15	September 2016-September 2018: Smarter Cardiac Sensing via Integrated Signal Processing (SmartHeart), **IT** internal project; the Principal Investigator is Miguel Coimbra (IT Porto), the project team members are Pedro Brandão (IT Porto), Hugo Silva (IT Lisbon), Nuno Garcia (IT Covilhã), Nuno Pombo (IT Covilhã) and Sandra Mattos (*Real Hospital Português*, Recife, Brazil); total project funding 58 K€
14	January 2014-December 2017: by appointment of the Portuguese Minister of Education and Science, representative of Portugal in the **COST Action** IC1307 "The European Network on Integrating Vision and Language (iV&L Net)," funded by the COST Association through the European Science Foundation and through European Commission Horizon 2020 Program
13	April 2013-September 2014: by appointment of the Portuguese Minister of Education and Science, representative of Portugal in the **COST Action** IC1002 "Multilingual and Multifaceted Interactive

#	Project description
	Information Access (MUMIA),” funded by the COST Office through the European Science Foundation
12	2013-2015: SIVIC: *Sistema Portátil Integrado de Vigilância Cardiovascular* / Wearable Integrated Cardiovascular Surveillance System (***Instituto de Telecomunicações***, National Project, FCT PTDC/EEI-ELC/1838/2012, 2013-2015); Researcher; total project funding 195 K€
11	2013-2014: Strategic project - LA 8 - 2013-2014 – ***Instituto de Telecomunicações*** (National project reference PEst-OE/EEI/LA0008/2013; 2013-2014); Researcher; total project funding: 3,177,938.00€; (http://www.fct.pt/apoios/unidades/consulta/vglobal_projecto.phtml.en?idProjecto=132939&idElemConcurso=7582); total managed funds at IT: 5 K€
10	2011-2012: Strategic project - LA 8 - 2011-2012 – ***Instituto de Telecomunicações*** (National project reference PEst-OE/EEI/LA0008/2011; 2011-2012); Researcher; total project funding: 5.972.054€; (http://www.fct.pt/apoios/projectos/consulta/vglobal_projecto.phtml.en?idProjecto=123257&idElemConcurso=4652); total managed funds at IT: 5 K€
9	2010: iDTV-HEALTH: Inclusive services to promote health and wellness via digital interactive television (**ECATI**, National Project, UTA-Est/MAI/0012/2009, 2010-2013); Researcher; total project funding 185 K€
8	2010: ADOPT_DTV: Barriers to digital television adoption in the context of the digital switchover (**ECATI,** National Project, FCT PTDC/CCI-COM/102576/2008, 2009-2010); researcher; total project funding 88 K€
7	March 2008-March 2012: Financial Rapporteur (elected) of the **COST Action** IC0703 - “Traffic Monitoring and Analysis: theory, techniques, tools and applications for the future networks”
6	February 2008-March 2012: by appointment of the Portuguese Minister of Science and Technology, representative of Portugal in the **COST Action** IC0703 “IC0703-“Traffic Monitoring and Analysis: theory, techniques, tools and applications for the future networks,” funded by the European Science Foundation
5	2008: TRAMANET: Traffic and Trust Management in Peer-to -Peer Networks (***Instituto de Telecomunicações,*** National Project, FCT PTDC/EIA/73072/2006, 2008-2010); researcher; total project funding 80 K€
4	2006-2007: Member of the expert list for the **COST Action** IC0703-“Traffic Monitoring and Analysis: theory, techniques, tools and applications for the future networks” funded by the European Science Foundation and promoted by the *Forschungszentrum Telekommunikation Wien* (FTW), Austria

#	Project description
3	2005: NSN OBS Optical Burst Switching (National Project, 2005-2008); researcher, funded by **FCT** and **Siemens / Nokia Siemens Networks**
2	2004: CONDENSA: IPv4/IPv6-Compliant Optical Burst Switching Network Design with Enhanced Signalling Architectures (***Instituto de Telecomunicações***, National Project, FCT POSC/EEA-CPS/60247/2004, 2004-2007); researcher; total project funding 32K€
1	2000: ROLI Project, submitted by **Associação Portuguesa de Radiodifusão** to the **POSI** program; Project web site http://www.radios.pt; Coordinator. (National Project, 2000-2005); researcher, funded through by FCT

3.3 Part B- 3) Patents

He is the co-author of nine awarded patents, twelve patent records and one patent submission, being the main author in ten of these (his name appears in bold, as the standard for names order in patents is the alphabetic order). These patents are mostly related to Computer Networks and to Signal Processing, in particular, Biosignals. The index shown before the author list is counter for the number of patents (awarded and submitted).

With the exception of the Portuguese patents, all of the author's patents have been developed in industrial environment as an outcome of research made in a company, and are property of companies, in particular, of SIEMENS and / or NOKIA SIEMENS.

International and European Patents

9 Mário M. Freire, Przemyslaw Lenkiewicz, **Nuno M. Garcia**, Paulo P. Monteiro, José R. Santos, "Method and Device for Processing Data in an Optical Network and Communication System Comprising Such Device,"

International Patent WO 2009/156409, 2009; *and*

European Patent EP 2139262 A1, 2009.

8 Mário Freire, **Nuno Garcia**, Marek Hajduczenia, Paulo Monteiro, Henrique Silva, "Monitoring Method and Apparatus of Processing of a Data Stream with High Rate/Flow,"

International Patent WO 2008/052583 (A1), 2008; *and*

European Patent EP 1780955 A1, 2007.

7 Mário Freire, **Nuno Garcia**, Marek Hajduczenia, Pedro Inácio, Paulo Monteiro, Henrique Silva, "Methods for estimating self-similarity degree and related estimator,"

European Patent EP 1983687 (A1), 2008.

6 Mário Freire, **Nuno Garcia**, Marek Hajduczenia, Pedro Inácio, Paulo Monteiro, Henrique Silva, "Method for detection of malign intrusions in a communication system and related detector,"

European Patent EP 1983714 (A1), 2008.

5 Mário Freire, **Nuno Garcia**, Marek Hajduczenia, Paulo Monteiro, Henrique Silva, "Method and machine for aggregating a plurality of data packets into a unified transport data packet,"

International Patent WO 2007/118594 (A1), 2007; *and*

European Patent EP 1848172 (A1), 2007.

4 Mário Freire, **Nuno Garcia**, Paulo Monteiro, José M. R. R. Santos, "Method for the Transmission of Data Packets by Means of an Optical Burst Switching Network and Network Nodes for an Optical Burst Switching Network,"

International Patent WO 2006/072406-A1, 2006.

USA Patents

3 Mário Freire, **Nuno Garcia**, Paulo Monteiro, José M. R. R. Santos, "Method for the Transmission of Data Packets by Means of an Optical Burst Switching Network and Network Nodes for an Optical Burst Switching Network,"

USA Patent US 7817919 (B1), 2010.

Portuguese Patents

3 **Nuno M. Garcia**, António Júlio Padez, Madalena Pereira, Rui Miguel, Manuel José Santos Silva, Nuno Pombo, "Método de associação e dissociação entre dois componentes que necessitem de conexões elétricas entre eles (System to associate and dissociate two componentes that need to be electrically connected)," Portuguese Patent submission, 2022.

2 Virginie Felizardo, **Nuno Garcia,** Nuno Pombo, Imen Megdiche, "Método e máquina para predição de eventos de hipoglicemia usando fusão de informação e consenso de modelos

preditivos (Method and machine to predict events of hypoglycaemia using information fusion and consense of predictive models)," Portuguese Patent, submitted, 2021.

1 **Nuno M. Garcia**, Paula Sousa, Miguel Castelo Branco; "Máquina de avaliação do estado de saúde através dos métodos conjuntos de auto-semelhança e entropia (Health status assessment machine through the joint application of self-similiarity and entropy methods)"; Portuguese patent number 106023, status patent published, 2013.

3.4 Part B- 4) Autonomy and Leadership

Over the years, the author has taken different roles as leader, as mentioned throughout this document. A summary of most relevant activities is reflected once again in this section.

2019 – today: President of the Scientific and Technologic Council of *Parkurbis Parque de Ciência e Tecnologia da Covilhã S.A*. since April 2019, Covilhã, Portugal, appointed as member by the municipality of Covilhã, and elected by the Council.

June 2019 – April 2021: Chair
of the ITC Conference Grants for the COST Action CA 16226 SHELD-ON (elected).

June 2019 – October 2019: Chair of the STSM Committee for the COST Action CA 16226 SHELD-ON (elected).

December 2012 – December 2016: Head of Laboratory at EyeSee Lda., Lisbon, Portugal.

August 2008 – April 2010: Head of Research, Plux*, Engenharia de Biosensores, Lda.,* Covilhã and Lisbon, Portugal.

April 2007 – December 2007: OSS/Networks Team Leader of the Development Center Portugal of *Nokia Siemens Networks S.A.*, Lisbon, Portugal.

October 2012 – October 2013: Director of the Computer Science and Engineering Bachelor of Science degree program (appointed), UBI.

1988 – 2004: Founder and administrator of the companies *Tropical Software Lda.* and *International Software Lda.*, Covilhã, Portugal.

January 2014 – today: co-Founder and Chair of the Executive Committee of BSAFE-Lab, UBI.

November 2013 – November 2017: Chair of the COST Action IC1303-AAPELE, COST Association, Brussels, Belgium.

November 2010 – May 2021: Coordinator of the Cisco Academy at UBI.

February 2010 – February 2018: Founder and coordinator of ALLab, IT and UBI.

3.5 Part B- 5) Scientific community recognition

Awards and Honours

Since 2005, he has been awarded the following awards and honours:

27 R2PRIS project, managed by the author, was considered as "**Inspiring Practice**" by the RAN – Radicalization Awareness Network (DG Migration and Internal Affairs), European Comission;

26 October 2021: listed as one of the **top 2% most influent world researchers** (Baas, Jeroen; Boyack, Kevin; Ioannidis, John P.A. (2021), "August 2021 data-update for "Updated science-wide author databases of standardized citation indicators"", Mendeley Data, V3, doi: 10.17632/btchxktzyw.3);

25 November 2020: listed as one of **the top 2% most influent world researchers** (Ioannidis JPA, Boyack KW, Baas J (2020) Updated science-wide author databases of standardized citation indicators. PLoS Biol 18(10): e3000918. https://doi.org/10.1371/journal.pbio.3000918);

26 December 2020: **Best Paper Award** to the paper "CoviHealth: A pilot survey of physical activities and nutrition of teenagers in Central Portugal," María Vanessa Villasana, Ivan Pires, Juliana Sá, Nuno Garcia, Eftim Zdravesvski, Petre Lameski, Ivan Chorbev, published in the proceedings of the 7th EAI International Conference on IoT Technologies for Healthcare, 2-4 December 2020, Viana do Castelo, Portugal;

25 November 2020: listed as one of the top 2% most influent world researchers (Ioannidis JPA, Boyack KW, Baas J (2020) Updated science-wide author databases of standardized citation indicators. PLoS Biol 18(10): e3000918. https://doi.org/10.1371/journal.pbio.3000918);

24 July 2020: Classified as "**Excellent**" by the University of Beira Interior, for the 2017-2019 period, following the *Regulamento de Avaliação Docente*-RAD, UBI;

23 May 2019: "***Professor Exemplar*** (Exemplary Professor)," award given by the two Computer Science student groups NINF and InfoWeb, UBI;

22 March 2019: "**Professor of the Year Award – area Research**," *Clube do Professor da Covilhã,* Covilhã, Portugal;

21 December 2018: **Centennial Gold Lion** award from Lions International, Oak Brooke, Illinois, USA;

20 October 2018: **Best Paper Award** to the paper "An Efficient Machine Learning-based Fall Detection Algorithm for Elderly Fall Detection," Faisal Hussain, Muhammad Basit Umair, Muhammad Ehatisham-ul-Haq, Ivan Miguel Pires, Tânia Valente, Nuno M. Garcia, Nuno Pombo, published in the proceedings of The Ninth International Conference on Sensor Device Technologies and Applications SENSORDEVICES 2018, Venice, Italy, 16-20 September 2018;

19 March 2018: awarded a **Short-Term Scientific Mission grant** from the COST CA16226 STSM Committee, with the value of 1500€, COST Association, Brussels, Belgium;

18 October 2017: **RIPE NCC Fellowship** to attend the RIPE meeting in Dubai, RIPE NCC, Amsterdam, Nederlands;

17 October 2017: awarded a **Short-Term Scientific Mission grant** from the COST IC1303 STSM Committee, with the value of 1400€, COST Association, Brussels, Belgium;

16 March 2017: **Centennial Silver Lion** award from Lions International, Oak Brooke, Illinois, USA;

15 March 2017: Classified as "**Excellent**" by the University of Beira Interior, for the 2014-2016 period, following the *Regulamento de Avaliação Docente*-RAD, UBI;

14 January 2017: awarded a **Short-Term Scientific Mission grant** from the COST IC1303 STSM Committee, with the value of 1500€, COST Association, Brussels, Belgium;

13 April 2016: **Cisco Instructor Excellence Award** 2015, Advanced Level, awarded to the performing top 25% Cisco Academy instructors world-wide, Cisco Networking Academy, San Jose, California, USA;

12 November 2015, Honorary Member Nº.1 to the NINF – *Núcleo de Informática da UBI*

11 October 2015: semi-finalist at the "***Prémio Open Mind ESEGUR**, Inovação no Setor da Segurança*," with the project "Pre-alarm System," mentoring the team of students composed by Hugo Rodrigues, David Séneca Ferreira, Filipe Delgado, Micael Costa, António Cunha, ESEGUR, Lisbon, Portugal;

10 March 2015: **Cisco Instructor Excellence** 2014, awarded to the performing top 10% Cisco Academy instructors world-wide, Cisco Networking Academy, San Jose, California, USA;

9 July 2014: 2nd place ***Poliempreende* award** by the Polytechnic Institute of Castelo Branco, Portugal, a prize awarded to the team Márcia Andrade, Ivan Pires, Rute Crisóstomo and Nuno Garcia, for the project "Functional App Test," IPCB, Castelo Branco, Portugal;

8 April 2014: Classified as "**Excellent**" by the University of Beira Interior, for the 2011-2013 period, following the *Regulamento de Avaliação Docente*-RAD, UBI;

7 April 2014: awarded an **Early Stage Researcher Grant** by the COST Office to attend the Epigenetics: From Bench to Bedside conference, held in Athens (Greece) from 05 to 08 May 2014, COST Association, Brussels, Belgium;

6 March 2014: **Cisco Instructor Excellence** 2013, awarded to the performing top 10% Cisco Academy instructors world-wide, Cisco Networking Academy, San Jose, California, USA;

5 January 2008: **Best Paper Award** to the paper "The Ethernet frame payload size and its effect on IPv4 and IPv6 traffic," Nuno M. Garcia, Mário M. Freire, Paulo P. Monteiro, published in the proceedings of The International Conference on Information Networking 2008 (ICOIN 2008), 23-25 January 2008, Busan, South Korea;

4 January 2005-December 2007: **Doctoral scholarship** awarded by the *Fundação para a* Ciência *e Tecnologia* (Portuguese Science and Technology Foundation - FCT) and by Siemens SA / Nokia Siemens SA (grant number SFRH/BDE/15527/2004), Lisbon, Portugal;

3 March 2006: with Paulo P. Monteiro and Marek Hajduczenia, receives the **Siemens Innovation and Excellence R&D Award** 2005, for their work on self-similarity of data signals, Siemens S.A., Alfragide, Portugal;

2 April 2005: following a proposal of the Scientific Council of the *Universidade da Beira Interior*, receives the **best graduate student award** of Mathematics and Computer Science in the year of 2004, UBI;

1 2014-2019: **Several productivity prizes** awarded by IT in a total value of over 16.000€ as a result of the publication of papers in international magazines or journals indexed by ISI Web of Knowledge / Web of Science and/or SCOPUS and because of the publication of books in international scientific publishers, IT, Aveiro, Portugal.

4 Part C) Other activities

4.1 Part C- 1) Outreach activities

In the context of his activity as teacher and researcher, he is often invited to speak at public events. He has also been interviewed for public television, local radios, national and local newspapers and corporate publications, as for example, the interview for SIC television channel (https://sicnoticias.pt/mundo/2020-02-12-Burlas-romanticas-vitimas-enganadas-com-promessas-de-amor-eterno), the interview to the *Observador* newspaper (http://observador.pt/especiais/a-internet-vai-ser-privatizada/, 2015), or the magazine celebrating the 20th anniversary of the Olisipo SA (Lisbon, Portugal) magazine (https://issuu.com/olisipo/docs/olisipo_20_anos, *pag*. 22-23, 2015). The last interview was given to the magazine "*Portugal a Programar*," Setembro de 2018 (https://www.revista-programar.info/artigos/entrevista-a-prof-nuno-garcia/).

Activity as invited speaker in scientific events

He has been invited as speaker or to deliver a keynote talk at the following scientific events:

36 Info Day on Intelectual Property intitled "*Proteção das invenções: como e para quê*?", UBI, June 2022 (activity open to the community);

36 Keynote "The many P's of Medicine" at the *V Jornadas de Engenharia Biomédica da UTAD*, March 2022;

35 Invited keynote talk on "5P Medicine and Smart IoT and applications: the development of predictive algorithms", eSmarTA2021, Lebanese International University (LIU), Sana'a, Yemen, 10-12 August 2021;

34 Speaker at the *4.ª Edição do Simpósio* Politech, on "Higer Education pos-pandemic COVID-19 (*O Ensino Superior Pós Pandemia COVID-19*)" organised by *ISEC Lisboa – Instituto Superior de Educação e Ciências* and by *IPT – Instituto Politécnico de Tomar*, 29 September 2020;

33 with Nuno Pombo and Miguel Castelo Branco, "The time for prediction has come," invited keynote talk at the World Symposium on Digital Intelligence for Systems and Machines (DISA) 2020 (disa2020.org), 24-25 June, Prague, Czech Republic; (event cancelled because of the COVID-19 pandemic);

32 Keynote Speaker for the "Decentralized Technologies and Applications for IoT (D'IoT) 2020" workshop, in the 2020 IEEE 91st Vehicular Technology Conference: VTC2020-Spring, 25 to 28 May 2020, Antwerp, Belgium;

31 with Nuno Pombo, "We think the 4 P's of Medicine are 5 or 6, depending on how you count...," lunch-seminar presentation CICS Health Sciences Research Center, 12 December 2019, Covilhã, Portugal;

30 with Nuno Pombo and Miguel Castelo Branco, "Predictive Medicine: The Contribution of Algorithms," presentation at the 24th International Society for Telemedicine and Health International Conference, 19 to 20 March 2019, Lisbon, Portugal;

29 Smart Furniture for Smart Habitats, in InnoRenew CoE 1st International Conference Timber – A healthy future for sustainable buildings, University of Primorska, 7 March 2019, Koper, Slovenia;

28 Research and challenges for AAL, *Jornadas de Bioengenharia*, UBI, 3 May 2017, Covilhã, Portugal;

27 The vision for a Personal Digital Life Coach, *Jornadas de InfoWeb,* UBI, 5 April 2017, Covilhã, Portugal;

26 Research on Biosignals at ALLab, *VIII Jornadas Nacionais de Ciências Biomédicas*, UBI, 9 March 2017, Covilhã, Portugal;

25 PDLC Personal Digital Life Coach, *Università Politecnica delle Marche*, 16 February 2017, Ancona, Italy;

24 Biosignal collection with BITalino, *Università Politecnica delle Marche*, 6 February 2017, Ancona, Italy;

23 Challenges of the SME in the ICT sector in the context of the Silver Economy, Round table, UBI, 18 January 2017

22 Expectances for AAL for the next 10 and 20 years, invited speaker at the special session Expectances for AAL and Enhanced Living Environments for 2025/2030, AAL Forum 2016, 28 September 2016, St. Gallen, Switzerland;

21 *Medir biosinais: resultados recentes e investigação actual no ALLab* (Measuring biosignals: recent results and current research at ALLab), invited speaker, NINF, UBI, 24 November 2016, Covilhã, Portugal;

20 *Sessão Final da 5ª edição do Fórum para a Sociedade da Informação - Governação da Internet*, member of the invited panel, co-organized by FCT, ANACOM, APDSI, DNS.PT, ERC, IAPMEI and by the Portugal ISOC Chapter, 23 November 2016, Lisbon, Portugal;

19 Net neutrality, IANA transition, ICANN accountability, invited panel member, Internet Society Portugal Chapter, 12 May 2015, Lisbon, Portugal;

18 Innovation in Health and Wellbeing: A Roadmap to the Design of a Personal Digital Life Coach, Keynote talk, World Usability Day event, University of Tallinn, 13 November 2015, Tallinn, Estonia;

17 A Roadmap to the Design of a Personal Digital Life Coach, Keynote Speaker, The 7th International Conference covering topics in ICT Innovations, 1-4 October 2015, Ohrid, R. Macedonia;

16 The change and challenge of the Internet: Internet governance, the governments and the politics on the Internet, Invited speaker, Open class, *Universitatea de Vest din Timişoara*, 10 November 2015, Timisoara, Romania;

15 Net neutrality, IANA transition, ICANN accountability, invited panel member, Internet Society Portugal Chapter, 12 May 2015, Lisbon, Portugal;

14 The Penitentiary Systems in Intelligent Society: challenges and opportunities, Technology and modernization opportunities of the penitentiary systems, B2CITIzens Association, 13 January 2015, Lisbon, Portugal;

13 Internet Governance: current multistakeholder model, future trends and call for action, *Universitatea de Vest din Timişoara*, *Institut de Cercetare Asociat Facultăţii de Ştiinţe Politice, Filosofie şi Ştiinţe ale Comunicării*, 21 January 2015, Timişora, Romania;

12 eHealth and Big Data, Polytechnic Institute of Portalegre, Operations Research and Big Data (OR&BD2014), 9 September 2014, Portalegre, Portugal;

11 Presentation of the research of ALLab and EyeSeeLab, invited speaker, Department of Electronics and Multimedia Communications, Faculty of Electrical Engineering and Informatics, Technical University of Kosice, 24 April 2014, Kosice, Slovakia;

10 *Governação da Internet* (Internet Governance), *Fórum para a Sociedade da Informação*, panel member, 4th June 2014, Lisbon, Portugal;

9 Is Internet Access a Human Right?, invited speaker, Workshop 4, EuroDIG 2013, Lisbon, Portugal;

8 Ambient Assisted Living (AAL), invited speaker, *II Jornadas de Bioengenharia* (II Bioengineering Conference), 15 May 2013, UBI, Covilhã, Portugal;

7 Internet Governance, invited panel member, Portuguese Internet Governance Forum, FCT and Internet Society ISOC Portugal, 10 July 2012, Lisbon, Portugal;

6 Challenges and Opportunities in Ambient Assisted Living, invited Poster, Nuno M. Garcia, PEMED, COST Conference on Personalised Medicine: Better Healthcare for the Future, 17-22 June 2012, Larnaca, Cyprus (available at http://www.cost.eu/download/pemedposters);

5 Internet of the Future, invited speaker, Nuno M. Garcia, 14 October 2011, PhD Seminar invited talk, Addis Ababa University, Addis Ababa, Ethiopia (available at http://allab.it.ubi.pt/download.php?d=Future_Internet.pdf);

4 Traffic Monitoring and Analysis, communication, Nuno M. Garcia, 8 February 2011, invited speaker, SITI Brainstorm Sessions, ULHT, Lisbon, Portugal (available at http://recil.ulusofona.pt/bitstream/handle/10437/1272/traffic_ analysis.pdf?sequence=1);

3 Mobile computing activities with wireless sensors at PLUX, invited speaker at an open class, Nuno M. Garcia, 12 December 2009, *Escola Superior de Tecnologia da Guarda*, IPG, Guarda, Portugal;

2 Future Scenary for Video over IP Transport Networks (*Redes de Transporte de Vídeo sobre IP: Cenários de Futuro)*, TDT - *Seminário de Alta Definição* / Broadcast Digital, invited speaker, Nuno M. Garcia, 28 January 2009, *Auditório Victor de Sá - Biblioteca Universitária*, ULHT, Lisbon, Portugal;

1 Architectures and Algorithms for IPv4/IPv6-compliant Optical Burst Switching Networks, invited speaker at an open class, Nuno M. Garcia, 17 December 2008, ULHT, Lisbon, Portugal.

4.2 Part C- 2) Other outreach activities

It is hard to distinguish between the activities that are directly consequence from the activity of R&D. In this section, activities related to scientific activities are reported, but also activities as member of panels to evaluate projects in Portugal and in other countries.

Editorial activity in scientific magazines or journals

He is:

6 Executive Associate Editor, The Open Bioinformatics Journal (July 2020 – September 2020; Scopus SJR 2018: 0.690), published by Bentham Science Publishers BV;

5 Associate Editor, IEEE Access Magazine (2018 Q1 Computer Science, H Index 56), published by the IEEE;

4 Editorial Board Member, The Open Bioinformatics Journal (Scopus SJR 2018: 0.690), published by Bentham Science Publishers BV;

3 Editorial Board Member, Applied Computer Systems, The Journal of Riga Technical University, Online ISSN: 2255-8691, published by Sciendo;

2 Editorial Review Board Member of the International Journal of E-Health and Medical Communications (IJEHMC) (2018 Q4 Computer Science, H Index 10), published by IGI-Global;

1 co-editor in Special Issues of indexed ISI Web of Knowledge magazines (as described previously).

Reviewing activity in scientific magazines or journals

He has performed reviews in the following scientific magazines or journals:

16 Area Editor for the European Alliance for Innovation Scalable Information Systems (launched 2019, not indexed), European Alliance for Innovation;

15 Reviewer for The Lancet Digital Health, (launched 2019, not indexed), Elsevier;

14 Reviewer for the IEEE Transactions on Network and Service Management (2018 Q1 Computer Science, H Index 35), IEEE;

13 Reviewer for the Computers in Biology and Medicine (2019 Q1 Computer Science, H Index 130), Elsevier;

12 Reviewer for the Journal of Sensor and Actuator Networks, MDPI (not indexed);

11 Reviewer for the European Journal of Information Systems (2018 Q1 Information Systems, H Index 96), Palgrave Macmillan Ltd.;

10 Reviewer for the IEEE Access Magazine (2018 Q1 Computer Science, H Index 56), IEEE;

9 Reviewer for the IEEE Communication Magazine (2018 Q1 Computer Networks and Communications, H Index 213), IEEE;

8 Reviewer for the IEEE Sensors Journal (2018 Q1 Engineering, H Index 100), IEEE;

7 Reviewer for the IET Communications (2018 Q3 Computer Science Applications, H Index 53), The IET;

6 Reviewer for the International Journal of Communication Systems (2018 Q3 Computer Network and Communications, H Index 41), John Wiley & Sons;

5 Reviewer for the Computer Networks journal (2018 Q1 Computer Networks and Communications, H Index 119), Elsevier;

4 Reviewer for the Journal of Optical Networking (2018 Q2 Computer Networks and Communications, H Index 42), Optical Society of America;

3 Reviewer for the Optical Switching and Networking journal (2018 Q3 Computer Networks and Communications, H Index 24), Elsevier;

2 Reviewer for the Computing Reviews, an affiliated of the Association for Computing Machinery (ACM), with several published reviews;

1 Reviewer for the eLearning Europa publications (http://www.elearningeuropa.info, http://www.elearningpapers.eu).

Technical Program Committee participation

He is or was member of over 130 Technical Program Committees for international scientific conferences. The detailed list of these conferences can be found in ANNEX B - Detailed peer reviewing activities.

Coordination of committees of scientific events

He is or was coordinator or co-coordinator of the following scientific events:

13 Session Chair for the International Conference on Sustainability in Software Engineering & Business Information Management: Innovation & Applications (SSEBIM 2022), 23-24 September 2022, Alcalá de Henares, Spain;

12 Workshop Co-Chair for the InnovTech4Health: Innovative Technologies for the Healthcare Empowerment, part of the EAI MobiQuitous 2021 - 18th EAI International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services; November 2021, Beppu, Japan;

11 General Co-Chair of the Organizing Committee of the GoodTechs Smart Objects And Technologies For Social Good, Organized By The European Alliance For Innovation (EAI), 15-17 September 2021, Aveiro, Portugal;

10 Posters and PhD Track Chair of the 7th EAI International Conference, HealthyIoT 2020, IoT Technologies for HealthCare, 3 December 2020, Viana do Castelo, Portugal;

9 General Chair of the Organizing Committee of the 6th EAI International Conference, HealthyIoT 2019, IoT Technologies for HealthCare, 4-6 December 2019, Guimarães, Portugal;

8 Host and local Coordinator of the Portuguese Internet Governance Forum 2019, organized by the FCT, 19 November 2019, UBI;

7 Challenges and benefits of digital technologies for ageing well, Euro Science Open Forum ESOF 2018, Parallel Session co-organizer, 9-14 July 2018, Toulouse, France;

6 SMARTHEART: Real-time technologies for cardiac signal processing, Workshop Co-Chair, Rome, Italy, 3-7 May 2018, to be held in conjunction with the 26th European Signal Processing Conference EUSIPCO 2018 (www.eusipco2018.org);

5 Workshop on Protocols, Applications and Platforms for Enhanced Living Environments, PAPELE 2017, Workshop Co-Chair, Lisbon, Portugal, 8 May 2017, to be held in conjunction with IFIP/IEEE International Symposium on Integrated Network Management IM 2017 (http://papele.eu/);

4 The third edition of the International Workshop on Enhanced Living EnvironMENTs, ELEMENT-2016, Workshop Co-Chair, in conjunction with 2016 IEEE 12th International Conference on Intelligent Computer Communication and Processing (ICCP 2016), 8 September 2016, Cluj-Napoca, Romania (http://aapele.eu/element2016/);

3 The second edition of the International Workshop on Enhanced Living EnvironMENTs, ELEMENT-2015, Workshop Co-Chair, in conjunction with ICT Innovations 2015, 1-3 October 2015, Ohrid, Macedonia (http://www.aapele.eu/element2015/);

2 The first edition of the International Workshop on Enhanced Living EnvironMENTs, ELEMENT-2014, Workshop Co-Chair, in conjunction with the 6th International Conference on Mobile Networks and Management (MONAMI 2014), 24 September 2014, Würzburg, Germany (http://www.aapele.eu/element2014/);

1 Session Chair in The Sixth IEEE and IFIP International Conference on Wireless and Optical Communications Networks (WOCN2009), 28 - 30 April 2009, Cairo, Egypt.

Participation on committees of scientific events

He is member of the Elsevier Advisory Panel since March 2017.

He was member of the committees for the following scientific events:

7 Member of the Organization Committee for ICEUBI 2019, International Congress on Engineering, UBI;

6 Member of the Committee for the COST Connect on Education and Learning, COST Association, 5-6 June 2019, Brussels, Belgium;

5 Member of the Committee for the COST Connect on Next Generation Internet (NGI), COST Association, 12-13 September 2017, Brussels, Belgium;

4 Member of the Scientific Committee for the AAL/COST/MYBL workshop on Ageing and Technologies, COST Association, 9-10 February 2017, Brussels, Belgium;

3 Member of the Organizing Committee for the COST Action IC1303 AAPELE Working Group 3 meeting in St. Gallen, 27 September 2016, St. Gallen, Switzerland;

2 Member of the Organizing Committee for the COST Action IC1303 AAPELE Working Group 3 meeting in London, 11-12 June 2015, London, England;

1 Member of the panel The Next Generation Internet - Finding Solutions to the Problems of Evolution and Migration Path for a Mobile Planet in the The Sixth IEEE and IFIP International Conference on wireless and Optical Communications Networks (WOCN2009), 28 - 30 April 2009, Cairo, Egypt.

He has been invited as speaker or to give a keynote talk at the following pedagogic and/or dissemination events:

19 Internet Governance Forum, coordinator of the main panel; members of the panel: Ana Neves, FCT, André Barata, UBI, Helena Martins, Google, Karel Novotný, APC - Association for Progressive

Communications, Ricardo Lafuente, *Associação D3 – Defesa dos Direitos Digitais* , November 2019, Covilhã, Portugal;

18 Speaker, Portugal eHealth Summit, 19-20 March 2019, Lisbon, Portugal;

17 Speaker for the activities on the Day for a Secure Internet, at the *Estabelecimento Prisional da Covilhã,* Covilhã, Portugal;

16 Internet Governance Forum, coordinator of the main panel; members of the panel: Elsa Costa e Silva, Universidade do Minho, João Romão, GetSocial.io, WEF Global Shaper, Sandra Hoferichter, EuroDIG, Vania Baldi, Universidade de Aveiro, Yuliya Morenets, TaC – Together Against Cybercrime, Leader of the Youth IGF Movement, November 2018, Aveiro, Portugal;

15 Speaker, "Medical Apps – Medicine 4.0," 28 April 2018, Covilhã, Portugal;

14 Speaker, Portugal eHealth Summit, 21-23 March 2018, Lisbon, Portugal;

13 Moderator, "*Simpósio: da UBI para o Mundo*," Faculty of Engineering, UBI, 12 March 2018, Covilhã, Portugal;

12 My COST experiences, Fundação para a Ciência e Tecnologia, University of Aveiro, 4 March 2015, Aveiro, Portugal;

11 E-Recruitment - *Plataformas digitais de apoio ao emprego* (E-Recruitment-digital platforms for employment support), communication, Pombo N., Garcia N., 15 May 2014, seminar invited talk, 2ª Feira do Emprego e do Empreendedorismo, Instituto Politécnico de Castelo Branco (Polytechnic Institute of Castelo Branco) (IPCB-ESGIN), Idanha-a-Nova;

10 *Profissões com Futuro-investigação no ALLab e EyeSeeLab* (Professions with Future-research at ALLab and EyeSeeLab), communication, Pombo N., Garcia N., 16 May 2014, seminar invited talk, Feira de Ensino, Empreendedorismo, Emprego e Juventude, 16 May 2014, Celorico da Beira, Portugal;

9 *Segurança na Internet* (Security in the Internet), communication, Tiago Simões, Alexandre Pinheiro, Nuno M. Garcia, Internet Safety Week, Escola Secundária Campos Melo (ESCM), February 2012, Covilhã, Portugal;

8 Wearable wireless device for interface control, poster, Nuno M. Garcia, Rafael Couto, Alexandre Pinheiro, 27 September 2011, Health Innovation & Technology Transfer Showcase, University of Minho, Braga, Portugal (available at http://allab.it.ubi.pt/images/documents/A2_Wearable_wireless_device_for_interface_control_EN.pdf);

7 *Sistema de interacção Mista Web+SMS para monitorização e treino de estilos de vida* (Mixed Web+SMS interaction system for monitoring and training of life styles), poster, Nuno M. Garcia, Rafael Couto, Alexandre Pinheiro, Francisco Viana, 27 September 2011, Health Innovation & Technology Transfer Showcase, University of Minho, Braga, Portugal (available at http://allab.it.ubi.pt/images/documents/A2_Sistema_de_Interac%C3%A7%C3%A3o_Mista_Web_SMS_para_Monitoriza%C3%A7%C3%A3o_Treino_Estilos_Vida_PT.pdf);

6 *Estimação de gasto energético durante actividade física* (Estimation of energy expenditure during physical activity), poster, Virginie Felizardo, Pedro Diniz Gaspar, Nuno M. Garcia, 27 September

2011, Health Innovation & Technology Transfer Showcase, University of Minho, Braga, Portugal (available at http://allab.it.ubi.pt/images/documents/A2_Estimacao_do_gasto_energetico_durante_actividade_fisica.pdf);

5 *Auto-semelhança de ECG no diagnóstico de patologias cardíacas* (ECG self-similarity in the diagnostic of cardiac pathologies), poster, Paula Sousa, Nuno M. Garcia, Miguel Castelo Branco, 27 September 2011, Health Innovation & Technology Transfer Showcase, University of Minho, Braga, Portugal (available at http://allab.it.ubi.pt/images/documents/A2_Auto_semelhan%C3%A7a_de_ECG_ no_diagn%C3%B3stico_de_patologias_cardiacas.pdf);

4 *Investigação em Ambientes Assistidos* (Research on Ambient Assisted Living), communication to high school students, José Silvestre Ribeiro Secondary School, Idanha-a-Nova, 28 February 2011;

3 The 1024 tricks to be a Computer Science Engineer, communication, Nuno M. Garcia, 9 March 2010, Faculty of Engineering, Department of Computer Science, UBI, Covilhã, Portugal (available from http://allab.it.ubi.pt/ download.php?d= os1024truques.pdf);

2 *A Internet do Futuro* (The Internet of the Future), communication, Nuno M. Garcia, 24 June 2009, Centro de Formação Militar e Técnica da Força Aérea Portuguesa, Base Aérea da Ota, Ota, Portugal;

1 *Segurança na Internet: coisas a fazer e coisas a evitar hoje e no futuro* (Security in Internet: things to do and things to avoid today and in the future), Safe Internet Day, communication, Nuno M. Garcia, 10 February 2009, Escola Secundária Frei Heitor Pinto, Covilhã, Portugal.

4.3 Part C- 3) Institutional positions held

As previously reported, the author has served as Vice-Dean of the Faculty of Engineering (2018-2021). He is currently President of the Scientific and Technologic Council of Parkurbis, a company incubator that is partly owned by UBI.

4.4 Part C- 4) Positions and roles of scientific and/or academic nature

Management activities

He has performed or is still performing the following management activities, some of which have been previously mentioned:

- October 2022 – September 2023: member of the Scientific Commission for the MSc Bioengineering Course, UBI;
- October 2021 – October 2024: elected member of the Scientific Council of the Faculty of Engineering, UBI;
- October 2021 – September 2023: member of the Scientific Commission for the BSc Computer Science Engineering course;

- October 2021 – September 2023: member of the Accreditation Commission for the BSc Computer Science Engineering course;
- October 2021 – September 2023: member of the Computer Science Engineering MSc course Scientific Commission;
- January 2018 – November 2021: Vice-Dean of the Faculty of Engineering, UBI;
- December 2017 – October 2021: member of the Scientific Commission for the MSc Bioengineering Course, UBI;
- December 2017 – October 2021: member of the Accreditation Commission for MSc Bioengineering Course, UBI;
- November 2017 – October 2019: Elected as Secretary of the Scientific Commission for the Computer Science Department, UBI;
- January 2014 – today: co-Founder and Chair of the Executive Committee of BSAFE-Lab, UBI;
- November 2013 – November 2017: Chair of the COST Action IC1303-AAPELE, COST Association, Brussels, Belgium;
- 2012/2013: BSc Computer Science and Engineering Course Director, UBI;
- November 2010 – May 2021: Coordinator of the Cisco Academy at UBI;
- October 2010 – today: Member of the Scientific Commission of the Computer Science Department of UBI;
- February 2010 – February 2018: Founder and coordinator of ALLab, IT and UBI.

Activity as evaluator of scientific projects

He has acted as project evaluator for the following organizations:

13 May 2022 – appointed as expert evaluator and member of the Jury for the CLEAR-Doc project, *Université Gustave Eiffel*, France

12 July 2021 – Appointed evaluator for projects by the Science Fund of the Republic of Serbia

12 February 2021 – Appointed evaluator for projects by the *Agência Nacional de Inovação*, Portugal

11 June 2020 – Appointed member of the evaluation panel for the FCT for an area related to Computer Science Engineering;

10 January 2019 – Appointed Rapporteur for a COST Action assessment; COST Association, Brussels, Belgium;

9 January 2019 – Member of the "*Rede Nacional de Mentores IAPMEI"* (National Mentoring Network, IAPMEI), mentoring one project (ongoing);

6, 7, 8 2019, 2018, 2017 - Member of the evaluation panel for the RIPE NCC Community Projects Fund for the 2017, 2018 and 2019 calls (https://www.ripe.net/support/cpf/ripe-ncc-community-projects-fund). Each year this fund awards 250K€ to projects from the RIPE community; RIPE NCC, Amsterdam, Nederlands;

4, 5 2019, 2014 - Appointed as Expert in the evaluation panel for new COST Actions, COST Office and COST Association, Brussels, Belgium;

2, 3 2018, 2017 - Member of the panel of evaluators for the 2017 and 2018 calls of the Bulgarian National Science Fund, Sofia, Bulgaria;

1 2014 - Appointed as Reviewer to the competitive research-funding program Impulse Fund, University of Leuven, Leuven, Belgium.

Outreach to companies

Following the Mission of the university, he has celebrated and is responsible for cooperation agreements with the following companies or organizations:

13 BioDevices, to adapt the Atrial Fibrillation framework developed in the context of the MSc work from Igor Matias to the VitalJacket line of products, funds to be transferred to UBI approx. 7.000€, 2020;

12 Wondercom Lda., to provide training to their collaborators via the Cisco Academy at UBI, 2019;

11 Pegasi Lda., to provide training to their collaborators via the Cisco Academy at UBI, 2017;

10 Portugal Telecom S.A., to provide training to their collaborators via the Cisco Academy at UBI, 2015;

9 PCMedic / Higher Functions Lda., to provide training to their collaborators via the Cisco Academy at UBI, 2015;

8 AMI Santos Informática Lda., Covilhã, Portugal, to research on the development of Web platforms for business support, funds transferred to UBI approx. 3.000€, 2015;

7 IT-Staff Lda. to provide training to their collaborators via the Cisco Academy at UBI, 2014;

6 Follow Inspiration Lda, Covilhã, Portugal, to research on methods for autonomous navigation of indoor robots, 2014;

5 *Associação de Diabéticos da Serra da Estrela*, to support the research on the assessment of the diabetic foot condition, 2014;

4 Favvus, IT HR S.A., Lisbon, Portugal, to research on platforms for Rapid Application Development, funds transferred to UBI approx. 12.000€, 2014;

3 True-Kare *Serviços e Equipamentos Lda.*, Lisbon, Portugal, to research on a new screen loader for elderly persons for their new line of products, funds transferred to UBI approx. 5.000€, 2014;

2 Eyesee Solutions Lda., Lisbon, Portugal, to research and develop a method to seamlessly integrate advertising in dynamic video and in images, funds transferred to UBI approx. 38.000€, 2013;

1 SFLAG *Sistemas de Informática Lda.*, Castelo Branco, Portugal, to research and develop a communication system between personal devices and a central service, funds transferred to UBI approx. 5.000€, 2013.

The activities that take place under these protocols involve the generation of knowledge and the transference of some of this knowledge to the economy, either in the form of improved processes, products or systems, or in the form of new products. These protocols often also integrate a component of funding from the companies to the university, as shown in some entries in sub-section 2.2.1 and the coordinated funded scholarships whose list can be found in ANNEX F - Detailed scientific supervisory of scholarships.

Participation in juries for Academic degrees

Since 2010 he was member of nine juries for PhD exams, one PhD thesis proposal defence, forty four juries for MSc exams, and President of thirty-two BSc final projects. The scientific areas for the PhD and MSc exams cover a wide span of scientific areas, from Software Engineering to Biosignal Analysis, including robotics, computer networks and medicine.

The PhD exams took place in Portugal, Italy, France, Republic of North Macedonia, and the MSc exams took place in seven universities and polytechnic institutes in Portugal, mostly the University of Beira Interior, but also including the *Universidade Nova de Lisboa, Universidade de Lisboa (Instituto Superior Técnico), Instituto Politécnico da Guarda, Instituto Politécnico de Castelo Branco,* ULHT and UAL.

He is or was member of the jury for the PhD scholarship grants funded by UBI and Santander Totta for the Faculty of Engineering, for the 2018/2019 call and for the 2019/2020 call.

He was member of the jury for the access of students to the BSc degree of Computer Science and Engineering (*Maiores de 23*), grading the candidates for the 2013/2014 call.

He was also member of the Professional Assessment Jury exams at the *Escola Secundária Frei Heitor Pinto*, Covilhã. Portugal, invited as Personality of Recognized Merit, in July 2019, July 2014, July 2012 and July 2010.

Details of the participation in juries for Academic degrees can be found in ANNEX G - Detailed participation in juries for PhD, MSc and BSc exams.

Participation in other types of juries

He is or was member of the following juries:

- Assistant Professor position, disciplinary area of Physics, sub-area of Biomedical Engineering, *Faculdade de Ciência e Tecnologia, Universidade Nova de Lisboa,* FCT NOVA, September 2022;
- *Direção intermédia de 2.º grau, Coordenador do Núcleo de Infraestruturas Técnicas, Sistemas de Informação e Gestão Documental, Instituto de Gestão Financeira da Segurança Social, I.P.,* published in the *Diário da República, 2ª Série, N. 180, 16 September 2022;*
- *Dirigente Intermédio de 2.º grau para o cargo de Chefe da Divisão de Documentação e Informação Jurídica do Conselho Superior da Magistratura,* published at the *Bolsa de Emprego Público (BEP)* code OE202207/0050; July 2022;
- Bolsa de Investigação (BI) for the project AddPath - Adaptative Designed Clinical Pathways, UBI and UpHill Lda., July 2022;
- *Bolsa de Iniciação à Investigação (BII)* (Research Starting Scholarship), in the context of the research project "*Tecnologia de gestão aplicada ao ambiente institucional*", for the Instituto Politécnico de Viseu, June 2021;
- *direção intermédia de 2.º grau, para Coordenador/a da Área de Acreditação do Departamento de Arquitetura e Desenvolvimento,* for the *Instituto de Informática*, as foreseen by item c) of the n.º 3 of the article 21 of the Portuguese Law n.º 2/2004 (15 January), July 2019;
- "International Selection Tender Procedure for Doctorate – Project R2E", aiming to hire a Junior PhD Researcher for BSAFE Lab (3 year contract), July 2020.

4.5 Part C- 5) Other positions

In addition to the work with companies and organizations external to UBI, in 2011 he was co-founder of HackLab-Cvl, a registered Hackerspace composed mostly by students from different engineering courses at UBI (https://wiki.hackerspaces.org/Hacklab-Cvl). This is a student lead group, only loosely supervised by the founders. Among others, HackLab-Cvl has promoted the following activities:

- Arduino programming workshop (2015);
- Linux installation workshop (2015);
- Building a quadcopter (2015);
- TechDays, a two-day conference (2015);
- Construction of an Arcade Machine; this machine is often used in promotion events by the Public Relations department of UBI, otherwise being in display and for use at the main hall of the building of the Computer Science Department, UBI (2012).

He is a member of the Consultive Council (*Conselho Consultivo*) for the STAR Junior Enterprise (STAR JE), a company founded by students of UBI, under the concept of the Junior Enterprise. As councilor, his

tasks include providing advice to the members of the company regarding issues of business and process management, innovation and IP management (more info in https://juniorenterprises.org/concept/).

He was also a member of the jury for the following events:

- Health Cup, organized by UBIMedical, January 2019;
- Hackathon “Hack the Brain,” organized by UBIMedical, November 2018.

5 Conclusions

5.1 Current ongoing research activities

The position as Full Professor of Biomedical Engineering at FCUL brings a new set of challenges, not only in the academic area, but also in the research and project areas.

Activities at ALLab are still ongoing but activities at BSAFE-Lab have been handed over to the new Chair of the Executive Committee.

At ALLab and IBEB, the research and project activities include the prosecution of the projects that are currently being funded, including the H2020 project PHArA-ON, and also, the research that is carried out in the context of PhD and MSc projects. As a result of the impact of the COST Action IC1303 AAPELE, the research at IBEB and ALLab tend to be focused in areas around Enhanced Living Environments, with a strong participation of colleagues from European universities and from industry.

These research activities can be summarized in the following lines:

- Exploration of metrics of entropy and self-similarity on multiple biosignal to infer prognostic outcome in patients. Previous research and previous IP have shown that self-similarity measurements can be applied to assess the health degree of a person. Preliminary results are promising and allow the inference of outcomes for several patients. Further research is necessary to extend these tools into the hospitals, as to make them usable and useful. A research team composed by Miguel Castelo-Branco (MD, PhD, Health Sciences Department, UBI), Nuno Garcia (PhD), Nuno Pombo (PhD), is addressing this research problem. The cooperation of the *Centro Hospitalar da Cova da Beira* is important as they provide the biosignal files from patients at the Intensive Care Unit;
- Development of predictive algorithms for health without resourcing to *omics, with the goal of allowing the integration of software algorithms based in biosignal analysis as auxiliary diagnostic tools. This research is responsibility of a team composed by Nuno Garcia (PhD), Sandeep (PhD), Nuno Pombo (PhD), Victor Albuquerque (PhD, Universidade de Fortaleza, Brazil), Madalena Costa (PhD, Harvard Medical School, USA), Lino Gonçalves (PhD, *Centro Hospitalar e Universitário de Coimbra*, Portugal), Leonice Pereira (PhD Student), Marco Antonio Vieira Macedo Grinet (MSc, PhD Student), Abel Gomes (PhD), Alexandre Lobo (PhD, University of Saint Joseph, Macao), Ana Rodrigues Gouveia (PhD), Natália António (MSc, MD, *Centro Hospitalar e Universitário de Coimbra*, Portugal), Virginie Felizardo (PhD), and Henriques Zacarias (MSc, PhD student).

These four lines of research are directly managed by the author and are complementary to other lines of research currently being developed in ALLab. Of special relevance are also the research on complex event discovery in biosignals and the use of artificial intelligence tools to synthetize and analyse biosignals.

5.2 Future lines of research

Non-exhaustively, these are some of the future research lines:

- Use of infrared photography as a diagnostic tool. Infrared cameras have seen a sharp decrease in price and this will allow the integration of such equipment in diagnostic and detection solutions; a project to fund the construction of an infrared camera has been started in June 2020 by a prospective MSc student, but because of the pandemic restrictions, its conclusion is expected to happen in 2023;
- Assessment of the performance for a new protocol based on UDP. A new protocol based on UDP has been devised and a concept paper will be submitted to a magazine or journal in the coming weeks. This protocol is based on the use of different ports to transmit and receive UDP packets, allowing the receiver to infer if packet loss has occurred or not, as well as to implement basic packet reordering. Simulations have been done that will prove the merits of this new way to use the UDP protocol and two MSc students are currently working on this;
- Study on new predictive algorithms for health. The plethora of biosignals we can now collect with wearable off-the-shelf devices will allow us in a near future to use these biosignals to feed algorithms that will detect early signs of disease.

5.3 Current ongoing teaching activities

As part of the evolution of the curricular units taught, the curricular unit of Computer Networks is going to be upgraded with three resources.

The first one is a series of Youtube™ videos that show how to solve the practical exercise sheets, in a step-by-step manner. Some of these videos can already be seen in the following link: https://www.youtube.com/watch?v=wNHOFUi8jSc&feature=youtu.be.

The second is a textbook that is currently under revision and whose authors are Nuno M. Garcia and Pedro Pinto (IPG). The textbook on Computer Networks is written in Portuguese and is aimed to the Portuguese speaking academic market. Co-author Pedro Pinto, is also a Cisco Academy trainer and awarded blogger and author, responsible for the Pplware series of articles (https://pplware.sapo.pt/).

The third is a textbook on IPv6, currently being written in Portuguese and commissioned by a Portuguese publisher. This project is lead by Nuno Galego, former MSc graduate.

5.4 Current ongoing publication activities

As a result of the intense work of the research team, the following papers and books are currently submitted or under elaboration:

Sandeep Pirbhulal, Henriques Zacarias, Igor Matias, Ali Hassan Sodhro, Nuno Pombo, Ana R. Gouveia, Hugo A. Ferreira, Virginie Felizardo Nuno M. Garcia, "Towards Predictive Algorithms for Healthcare: Challenges and Opportunities", submitted to a magazine;

Ana R. Gouveia, Nuno M. Garcia, Nuno Pombo, João Vilelas Raposo, Luís Pires, Marta Soares, José Martinez-de-Oliveira, "Assessment of areas in thermographic breast images of lactating women," submitted to IEEE Access.

5.5 Current projects

Since 2017 he has been co-proponent (or Principal Investigator) of 21 EU proposals, 4 of them approved, and 17 others rejected. The following projects have been submitted and are under assessment, or are in the writing phase and will be submitted in a near future:

- P2020 Smart Agriculture, a co-promotion project with *Engenho de Mestre S.A.*;
- Smart Self-Assessment of Fatigability in Outcomes and Resilience of Older Adults, *Instituto de Telecomunicações* internal project;
- MSCA proposal on the impact of fake news on well-being.

5.6 Final comments

Taking the students' assessment of the performance of the author, the four least graded topics of assessment are related to the "Organization and structure of the contents and activities of the curricular unit", "Clarity while discussing the curricular unit syllabus", "Respect of the class schedule" and "Promotion of the critical thinking of the students", having received a number of totally positive answers of respectively 88,59%, 88,04%, 87,87%, 87,61%, 88,18% for the 2019/2020 inquiries. Although these are good rates, but also because there are no means of comparison with other teaching methodologies, as future work, the author proposes to address these issues by defining and adopting a suitable strategy, that has to integrate more discussion of the topics in the classes, an explanation on why and how the practical classes and the theoretical classes are organized, on taking more time to detail the syllabus, and of course, to integrate the suggestions the students may give.

It is usual that a prospective academy employer asks the candidate to provide a Teaching Statement and a Research Statement. Although this is not usually required in Portugal, these documents can be found as ANNEX H – Teaching Statement and ANNEX I – Research Statement.

ANNEX A – Links for publications

Links for publications

The following lists all publications, in decreasing order of indexation at the Google Scholar search engine, and provides a link for the publications (in general, with no particular distinction between magazine or conference publications or ArXiv submissions. The list is frequently curated at the Google Scholar platform to assure that all the publications are authored by the author of this CV.

The following table shows four columns, The first one is a simple counter, from 1 (the most recent publication) to *n* (the oldest publication). The second column contains the name of the paper and embeds a link to its corresponding landing page at the Google Scholar platform. The third column contains a code of the type of publication, standing MP for Magazine publication (indexed in SCOPUS), CP for Conference Paper, MP-NI for Magazine publication non-indexed, ArX for ArXiv publication, and BC for Book Chapter. Finally Book is a Book, and THESIS is the author's thesis. When relevant, additional details on each publication have been reported previously in this document.

Table 17 -List of publications with links.

#	Paper	Type	Year
1	Thought on Food: A Systematic Review of Current Approaches and Challenges for Food Intake Detection	MP	2022
2	A Brief Review on Gender Identification with Electrocardiography Data	MP	2022
3	Monitoring of Cardiovascular Diseases: An Analysis of the Mobile Applications Available in the Google Play Store	MP	2022
4	Optical Burst Switching and Wireless communications-are they similar?	CP	2022
5	Can the Eight Hop Test Be Measured with Sensors? A Systematic Review	MP	2022
6	Daily motionless activities: A dataset with accelerometer, magnetometer, gyroscope, environment, and GPS data	MP	2022
7	Technological solutions for sign language recognition: a scoping review of research trends, challenges, and opportunities	MP	2022
8	Ethical Issues in Software Requirements Engineering	MP-NI	2022
9	The influence of cloud computing on the healthcare industry: a review of applications, opportunities, and challenges for the CIO	CP	2022
10	A Two-Fold Machine Learning Approach to Prevent and Detect IoT Botnet Attacks	MP	2021
11	Accurate range-free localization algorithms based on PSO for wireless sensor networks	MP	2021

#	Paper	Type	Year
12	Mobile 5P-medicine approach for cardiovascular patients	MP	2021
13	Mobile Device Approach for the Measurement of Jump Flight Time	CP	2021
14	Hypoglycaemia Prediction Models With Auto Explanation	MP	2021
15	Keeping Children Safe online with Limited Resources: Analyzing what is seen and heard	MP	2021
16	Experimental Study on Wound Area Measurement with Mobile Devices	MP	2021
17	Comparison of machine learning techniques for the identification of human activities from inertial sensors available in a mobile device after the application of data imputation …	MP	2021
18	Data-based algorithms and models using diabetics real data for blood glucose and hypoglycaemia prediction–a systematic literature review	MP	2021
19	Rural healthcare iot architecture based on low-energy lora	MP	2021
20	Mobile application for Inclusive Tourism	CP	2021
21	Indoor and outdoor environmental data: A dataset with acoustic data acquired by the microphone embedded on mobile devices	MP	2021
22	A framework for malicious traffic detection in IoT healthcare environment	MP	2021
23	Approach for the Wound Area Measurement with Mobile Devices	CP	2021
24	The Internet Protocol--Past, some current limitations and a glimpse of a possible future	ArX	2021
25	A Brief Review on the Sensor Measurement Solutions for the Ten-Meter Walk Test	MP	2021
26	A Systematic Investigation of Models for Color Image Processing in Wound Size Estimation	MP	2021
27	Computerised Sentiment Analysis on Social Networks. Two Case Studies: FIFA World Cup 2018 and Cristiano Ronaldo Joining Juventus	CP	2021
28	An experimental study on the validity and reliability of a smartphone application to acquire temporal variables during the single sit-to-stand test with older adults	MP	2021
29	Prediction of Atrial Fibrillation using artificial intelligence on Electrocardiograms: A systematic review	MP	2021
30	A Brief Review on the Sensor Measurement Solutions for the ten-meter walk test	MP	2021
31	Towards detecting pneumonia progression in covid-19 patients by monitoring sleep disturbance using data streams of non-invasive sensor networks	MP	2021
32	Recognition of Activities of Daily Living Based on a Mobile Data Source Framework	BC	2021
33	Air pollution prediction with multi-modal data and deep neural networks	MP	2020
34	Diabetes Disease through Machine Learning: A comparative study	CP	2020
35	Control and Prevention of Personal Stress	CP	2020

#	Paper	Type	Year
36	E-health and M-health applications in Georgia: A review on the free available applications for Android Devices	CP	2020
37	Personal Digital Life Coach for Physical Therapy	CP	2020
38	Literature on applied machine learning in metagenomic classification: a scoping review	MP	2020
39	Identifying Packet Loss and Reordering Packets in Keyed UDP Transmissions	CP	2020
40	CoviHealth: A pilot study with teenagers in schools of Centre of Portugal	CP	2020
41	Approach for the Development of a System for COVID-19 Preliminary Test	CP	2020
42	Activities of daily living with motion: A dataset with accelerometer, magnetometer and gyroscope data from mobile devices	MP	2020
43	Homogeneous data normalization and deep learning: A case study in human activity classification	MP	2020
44	Classifier precision analysis for sleep apnea detection using ECG signals	MP	2020
45	Aging at work: A review of recent trends and future directions	MP	2020
46	Data acquisition of timed-up and go test with older adults: accelerometer, magnetometer, electrocardiography and electroencephalography sensors' data	MP	2020
47	Clinical decision support systems for chronic diseases: A systematic literature review	MP	2020
48	Towards 5G-enabled self adaptive green and reliable communication in intelligent transportation system	MP	2020
49	Improving human activity monitoring by imputation of missing sensory data: experimental study	MP	2020
50	Promotion of healthy lifestyles to teenagers with mobile devices: a case study in Portugal	MP	2020
51	Using different models of machine learning to predict attendance at medical appointments	MP-NI	2020
52	Analysis of the results of heel-rise test with sensors: A systematic review	MP	2020
53	An Efficient Machine Learning-based Elderly Fall Detection Algorithm	ArX	2020
54	An efficient data imputation technique for human activity recognition	ArX	2020
55	Mobile applications for training plan using android devices: A systematic review and a taxonomy proposal	MP	2020
56	Qualidade do sono e funcionamento sexual em adultos saudáveis	MP	2020
57	Measurement of Results of Functional Reach Test with Sensors: A Systematic Review	MP	2020
58	Machine learning techniques with ECG and EEG data: an exploratory study	MP	2020
59	Prediction of attendance at medical appointments based on machine learning	CP	2020
60	PRIPRO: Solution for user profile control and management based on data privacy	CP	2020
61	Study of a Context Quality Model for UbiPri Middleware	CP	2020

#	Paper	Type	Year
62	Identifying Packet Loss and Reordering Packets in Keyed UDP Transmissions	ArX	2020
63	Towards QoE Optimization in Medical Multimedia Services for Decentralized IoT-based Applications	CP	2020
64	Identification of diseases based on the use of inertial sensors: A systematic review	MP	2020
65	Analysis of trends in scientific publications by an NLP toolkit: A case study in Software Development Methods for Enhanced Living Environment	CP	2020
66	Is The Timed-Up and Go Test Feasible in Mobile Devices? A Systematic Review	MP	2020
67	Pattern recognition techniques for the identification of activities of daily living using a mobile device accelerometer	MP	2020
68	Circular Economy for Clothes Using Web and Mobile Technologies—A Systematic Review and a Taxonomy Proposal	MP	2020
69	Reduction of Surgical Risk Through the Evaluation of Medical Imaging Diagnostics	ArX	2020
70	Promotion of healthy nutrition and physical activity lifestyles for teenagers: A systematic literature review of the current methodologies	MP	2020
71	Identification of warning situations in road using cloud computing technologies and sensors available in mobile devices: A systematic review	MP	2020
72	A research on the classification and applicability of the mobile health applications	MP	2020
73	A cost analysis of implementing a blockchain architecture in a smart grid scenario using sidechains	MP	2020
74	Identification of daily activites and environments based on the adaboost method using mobile device data: A systematic review	MP	2020
75	Activities of daily living and environment recognition using mobile devices: a comparative study	MP	2020
76	Machine learning for the evaluation of the presence of heart disease	CP	2020
77	Identification of Activities of Daily Living through Artificial Intelligence: an accelerometry-based approach	CP	2020
78	Detection of diseases based on Electrocardiography and Electroencephalography signals embedded in different devices: An exploratory study	MP-NI	2020
79	Mobile Applications Dedicated for Cardiac Patients: Research of Available Resources	BC	2020
80	A review on the artificial intelligence algorithms for the recognition of Activities of Daily Living using sensors in mobile devices	BC	2020
81	Mobile applications for the promotion and support of healthy nutrition and physical activity habits: A systematic review, extraction of features and taxonomy proposal	MP	2019
82	Recognition of activities of daily living and environments using acoustic sensors embedded on mobile devices	MP	2019
83	Towards machine learning enabled security framework for IoT-based healthcare	CP	2019
84	An efficient machine learning-based elderly fall detection algorithm	ArX	2019
85	Livestock real-time vital signs monitoring system	CP	2019

#	Paper	Type	Year
86	Can deep learning contribute to healthy aging at work?	CP	2019
87	PRICHAIN: a Partially Decentralized Implementation of UbiPri middleware using blockchain	MP	2019
88	Breast Skin Temperature Evaluation in Lactating and Non-lactating Women by Thermography: An Exploratory Study	CP	2019
89	Towards an accurate sleep apnea detection based on ECG signal: The quintessential of a wise feature selection	MP	2019
90	Is the Overfitting in a Neural Network a Reliable Model for the Recognition of Activities of Daily Living?	CP	2019
91	Smartphone-based automatic measurement of the results of the Timed-Up and Go test	CP	2019
92	CoviHealth: Novel approach of a mobile application for nutrition and physical activity management for teenagers	CP	2019
93	A review of frameworks on continuous data acquisition for e-Health and m-Health	CP	2019
94	Sleep quality and sexual functioning in healthy adults	MP	2019
95	Non-invasive measurement of results of timed-up and go test: preliminary results.	CP	2019
96	Towards pain-fingerprinting: A ubiquitous and interoperable clinical decision support system for pain assessment	CP	2019
97	Identification of real and imaginary movements in EEG using machine learning models	CP	2019
98	Agile scrum scaling practices for large scale software development	CP	2019
99	Version reporting and assessment approaches for new and updated activity and heart rate monitors	MP	2019
100	How to get a badge? unlock your mind: Motivation through student empowerment	CP	2019
101	A telemedicine robot system for assisted and independent living	MP	2019
102	Keyed user datagram protocol: concepts and operation of an almost reliable connectionless transport protocol	MP	2019
103	Enhanced living environments: Algorithms, architectures, platforms, and systems	Book	2019
104	Healthcare	CP	2019
105	IoT Technologies for HealthCare	CP	2019
106	Automation in systematic, scoping and rapid reviews by an NLP toolkit: a case study in enhanced living environments	BC	2019
107	A importância dos indicadores biomédicos no funcionamento sexual em adultos portugueses saudáveis	MP	2019
108	Reliability assessment of new and updated consumer-grade activity and heart rate monitors	CP	2018
109	RFID Supporting IoT in Health and Well-Being Applications	BC	2018
110	Multi-Sensor Mobile Platform for the Recognition of Activities of Daily Living and their Environments based on Artificial Neural Networks.	CP	2018

#	Paper	Type	Year
111	Framework for the Recognition of Activities of Daily Living and Their Environments in the Development of a Personal Digital Life Coach.	CP	2018
112	Identification of activities of daily living through data fusion on motion and magnetic sensors embedded on mobile devices	MP	2018
113	Conceptual Definition of a Platform for the Monitoring of the Subjects with Nephrolithiasis Based on the Energy Expenditure and the Activities of Daily Living Performed	CP	2018
114	Android library for recognition of activities of daily living: Implementation considerations, challenges, and solutions	MP	2018
115	Validation of a method to determine the reaction time in the 30-s chair stand test in elderly people	CP	2018
116	Scaffolding students on connecting STEM and interaction design: Case study in Tallinn University Summer School	CP	2018
117	Limitations of the Use of Mobile Devices and Smart Environments for the Monitoring of Ageing People.	CP	2018
118	The importance of biomedical indicators in sexual functioning in healthy Portuguese adults	MP	2018
119	Towards a Fully Automated Bracelet for Health Emergency Solution.	CP	2018
120	Measurement of the Reaction Time in the 30-S Chair Stand Test using the Accelerometer Sensor Available in off-the-Shelf Mobile Devices.	CP	2018
121	Approach for the development of a framework for the identification of activities of daily living using sensors in mobile devices	MP	2018
122	Recognition of activities of daily living based on environmental analyses using audio fingerprinting techniques: A systematic review	MP	2018
123	Approach for the Development of a Framework for the Identification of Activities of Daily Living Using Mobile Devices' Sensors	ArX	2018
124	AALaaS/ELEaaS platforms	BC	2018
125	Human-computer interaction monitoring and analytics platform-Wisconsin card sorting test application	CP	2018
126	Hydriney: A Mobile Application to Help in the Control of Kidney Stones Disease	CP	2018
127	Validation of a method for the estimation of energy expenditure during physical activity using a mobile device accelerometer	MP	2018
128	Importance of personalized health-care models: A case study in activity recognition	CP	2018
129	TV White Space Spectrum Administration	BC	2018
130	Game theoretic approaches in mobile cloud computing systems for big data applications: a systematic literature review	CP	2018
131	Automation in Systematic, Scoping and Rapid Reviews by an NLP Toolkit: A Case Study in Enhanced Living Environments	BC	2018
132	UNOBTRUSIVE SYSTEM FOR THE DETECTION OF MENTAL FOCUS DEPLETION	CP	2018
133	Enhanced Living Environments, Algorithms, Architectures, Platforms, and System	Book	2018
134	What Do We Mean about the Validation of the Activity Monitoring Devices?	ArX	2018
135	Scaffolding Students on Connecting STEM and Interaction Design	CP	2018

#	Paper	Type	Year
136	Intelligent system for after-stroke home rehabilitation	BC	2017
137	Enhanced Living Environments: From Models to Technologies	Book	2017
138	Introduction to enhanced living environments	BC	2017
139	End-users' AAL and ELE service scenarios in smart personal environments	BC	2017
140	User environment detection with acoustic sensors embedded on mobile devices for the recognition of activities of daily living	ArX	2017
141	A Multiple Data Source Framework for the Identification of Activities of Daily Living Based on Mobile Device Data	ArX	2017
142	Data Fusion on Motion and Magnetic Sensors embedded on Mobile Devices for the Identification of Activities of Daily Living	ArX	2017
143	Brain computer interface systems for neurorobotics: methods and applications	MP	2017
144	Cloud computing as technological solutions for higher education institutions: Adoption readiness assessment model: Reseach in-progress	CP	2017
145	Limitations of energy expenditure calculation based on a mobile phone accelerometer	CP	2017
146	Smartphones as Multipurpose Intelligent Objects for AAL: Two Case Studies	CP	2017
147	Real-time wireless UWB sensor network for person monitoring	CP	2017
148	Cloud Suitability Assessment Method for Application Software.	CP	2017
149	Improving activity recognition accuracy in ambient-assisted living systems by automated feature engineering	MP	2017
150	Classification techniques on computerized systems to predict and/or to detect Apnea: A systematic review	MP	2017
151	Desafios de segurança numa transição de IPv4 para IPv6	CP	2017
152	Sistema de monitorização de biosinais de gado baseado em tecnologias da informação e comunicação & eletrónica (TICE)	CP	2017
153	Simulation in medical school education	CP	2017
154	Introduction to the AAL and ELE Systems	BC	2017
155	Cloud-Oriented Domain for AAL	BC	2017
156	Cloud based smart living system prototype	BC	2017
157	End-users testing of enhanced living environment platform and services	BC	2017
158	Matching requirements for ambient assisted living and enhanced living environments with networking technologies	BC	2017
159	AAL and ELE platform architecture	BC	2017
160	A survey on IoT: architectures, elements, applications, QoS, platforms and security concepts	CP	2017
161	Elderly mobility analysis during Timed Up and Go test using biosignals	CP	2016

#	Paper	Type	Year
162	Smartphones as multipurpose intelligent objects for AAL: two case studies	CP	2016
163	Computerized Systems for Remote Pain Monitoring	CP	2016
164	Ambient assisted living and enhanced living environments: principles, technologies and control	BC	2016
165	ubiSleep: An ubiquitous sensor system for sleep monitoring	CP	2016
166	Sleep apnea detection using a feed-forward neural network on ECG signal	CP	2016
167	Electrocardiography, electromyography, and accelerometry signals collected with BITalino while swimming: Device assembly and preliminary results	CP	2016
168	A data fusion model to evaluate computerized pain diaries on anxiety and depression assessment	CP	2016
169	Metabolic. Care: a novel solution based on a thermography for detection of diabetic foot	CP	2016
170	Identification of activities of daily living using sensors available in off-the-shelf mobile devices: Research and hypothesis	CP	2016
171	Pain assessment–can it be done with a computerised system? A systematic review and meta-analysis	MP	2016
172	From data acquisition to data fusion: a comprehensive review and a roadmap for the identification of activities of daily living using mobile devices	MP	2016
173	Contribution of biosignals for emotional analysis on image perception	CP	2016
174	Towards interoperable enhanced living environments	BC	2016
175	Validation techniques for sensor data in mobile health applications	MP	2016
176	Desafios de segurança numa transição de IPv4 para IPv6 Security challenges in transition from IPv4 to IPv6	CP	2016
177	QoS performance analysis of non-slotted and slotted optical burst switched networks	CP	2015
178	A roadmap to the design of a personal digital life coach	CP	2015
179	An off-the-shelf platform for automatic and interactive text messaging using short message service	CP	2015
180	Multi-sensor data fusion techniques for the identification of activities of daily living using mobile devices	CP	2015
181	A review of thermal methods and technologies for diabetic foot assessment	MP	2015
182	AAL Research Topics	BC	2015
183	Business Models and Study Cases	BC	2015
184	Communications in AAL	BC	2015
185	Review, State of the Art, and AAL Concepts	BC	2015
186	AAL Applications to Specific Areas	BC	2015

#	Paper	Type	Year
187	-Mobility and Multihoming Data Transmission Protocols	BC	2015
188	A Review of Monitoring and Assisted Therapeutic Technology for AAL Applications	BC	2015
189	Pervasive and Mobile Healthcare Applications	BC	2015
190	A Business Model for Ambient Asisted Living Solutions	BC	2015
191	Ambient Assisted Living, From Technology to Intervention	BC	2015
192	Psychometric Study of a Questionnaire for Academic Study Processes of Portuguese College Students.	CP	2015
193	Analyzing the academic approaches to learning of Portuguese college students through the psychometric study of a questionnaire	CP	2015
194	mHealth Sensors and Applications for Personal Aid	BC	2015
195	Measurement of heel-rise test results using a mobile device	CP	2015
196	Wound Area Assessment using Mobile Application.	CP	2015
197	Calculation of Jump Flight Time using a Mobile Device.	CP	2015
198	Assistive technologies for homecare: Outcomes from trial experiences	CP	2015
199	Differential image analysis using Shannon's entropy: preliminary results	CP	2015
200	Machine learning approaches to automated medical decision support systems	BC	2015
201	Artificial neural learning based on big data process for eHealth applications	BC	2015
202	E-Health: Current status and future trends	BC	2015
203	QoS Performance Analysis of Non-slotted and Slotted Optical Burst Switched Networks	CP	2015
204	A Review of Monitoring and Assisted Therapeutic Technology for AAL Applications	BC	2015
205	TICE. Healthy: Integração de soluções TIC para a" Saúde e Qualidade de Vida"/TICE. Healthy: Integration of ICT solutions for" Health and Quality of Life"	MP	2014
206	Big data reduction using RBFNN: A predictive model for ECG waveform for eHealth platform integration	CP	2014
207	Metabolic. Care: A hardware and software platform to monitor and assess diabetic foot condition	CP	2014
208	A validated multidisciplinary study on the assessment of SMS messages as a mean to improve self-efficacy in university students	CP	2014
209	Development of a low power wireless network to support elderly people based on eZ430-Chronos and SimpliciTI	CP	2014
210	TICE. Healthy: A perspective on medical information integration	CP	2014
211	Psychometric study of a scale for academic self-efficacy assessment among portuguese college students	CP	2014
212	Energy-harvesting methods for medical devices	BC	2014

#	Paper	Type	Year
213	Convergence through All-IP networks	Book	2013
214	All-IP Networks: Introduction	BC	2013
215	Study on the performance of slotted and non-slotted Optical Burst Switched networks	CP	2013
216	Architectures and Algorithms for IP Optical Burst Switching Networks	Book	2013
217	A Review of Time Domain Switching Optical Burst Switched Networks	CP	2012
218	Smart Clothing for Health Care	BC	2012
219	UBI–DCTT–TEXTILE AND PAPER MATERIALS RESEARCH UNIT	CP	2012
220	Chapter X-Mobility and multi-homing data transmission protocols	BC	2012
221	Context-awareness for mobility management: a systems survey for healthcare monitoring	CP	2011
222	Context-awareness for mobility management: a systems survey for healthcare monitoring	CP	2011
223	The effect of time slot parameters on slotted optical burst switched networks	CP	2011
224	Acquisition of multiple physiological parameters during physical exercise	MP	2011
225	Method for transmission of data packets by means of an optical burst switching network and network nodes for an optical burst switching network	PAT	2010
226	Algorithms for extraction and visualization of metadata from domain name server records	CP	2010
227	Lightweight portable sensors for health care	CP	2010
228	Intelligent clothing for health care	CP	2010
229	A new architecture for optical burst switching networks based on cooperative control	CP	2009
230	Performance assessment of optical burst switching networks based on a common control channel with distributed control	CP	2009
231	The ethernet frame payload size and its effect on IPv4 and IPv6 traffic	CP	2008
232	Architectures and algorithms for ipv4/ipv6-compliant optical burst switching networks	THESIS	2008
233	A new architectural approach for optical burst switching networks based on a common control channel	MP	2007
234	On the Performance of Shortest Path Routing Algorithms for Modeling and Simulation of Static Source Routed Networks--an Extension to the Dijkstra Algorithm	CP	2007
235	Enhanced just-in-time: a new resource reservation protocol for optical burst switching networks	CP	2007
236	Performance of optical burst switched networks for grid applications	CP	2007
237	Measuring and Profiling IP Traffic	CP	2007

#	Paper	Type	Year
238	On the Performance of Shortest Path Routing Algorithms for Static Source Routed Networks–an Extension to the Dijkstra Algorithm	CP	2007
239	Burst assembly with real IPv4 data–performance assessement of three assembly algorithms	CP	2006
240	Issues on performance assessment of optical burst switched networks: Burst loss versus packet loss metrics	CP	2006
241	Assessment of burst assembly algorithms using real ipv4 data traces	CP	2006
242	A new architecture for optical burst switched networks based on a common control channel	CP	2006
243	Traffic Characterization and Modeling II-Burst Assembly with Real IPv4 Data--Performance Assessment of Three Assembly Algorithms	CP	2006
244	Optical communications research activities at COM RD1 Siemens SA	MP	2005
245	Object-oriented modeling and simulation of optical burst switching networks	CP	2004

ANNEX B - Detailed peer reviewing activities

Service in conferences

He is or was member of the Technical Program Committee of the following international conferences:

138 FedCSIS 2022 (17th Conference on Computer Science and Intelligence Systems) Warsaw, Poland, 17-20 September 2023;

137 2020 IEEE Globecom, workshop on AIdSH: International Workshop on AI-driven Smart Healthcare, Taipei, Taiwan, 7-11 December 2020;

136 The 2nd International Conference on Cybernetics and Intelligent Systems (ICORIS), Universitas Klabat, Airmadidi-Manado, Indonesia, 26-27 October 2020;

135 2020 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2020), Toronto, Ontario, Canada, 11-14 October 2020;

134 The 2nd international Workshop on innovative Smart city technologies 2020 (WISCT'2020), Faculty Ben M'Sick of Sciences, Casablanca, Morocco, 19-20 June 2020;

133 6th International Conference on Information and Communication Technologies for Ageing Well and e-Health (ICT4AWE), Prague, Czech Republic, 3-5 May 2020;

132 The Seventh International Symposium on Security in Computing and Communications (SSCC'19). SSCC'19, Trivandrum, Kerala, India, 18-21 December 2019;

131 ICEUBI 2019 – International Congress on Engineering, Engineering for Evolution, Covilhã, Portugal, 26-29 November 2019;

130 The 2019 International Conference on Internet of Things and Intelligence System (IoTaIS), Bali, Indonesia, 5-7 November 2019;

129 11th ICT Innovations Conference 2019, Ohrid, Republic of North Macedonia, 17-19 October 2019;

128 NEUROTECHNIX, 7th International Congress on Neurotechnology, Electronics and Informatics, Vienna, Austria, 20-21 September 2019;

127 The 22nd International Conference on Climbing and Walking Robots and Support Technologies for Mobile Machines (CLAWAR 2019), Kuala Lumpur, Malaysia, 26 –28 August 2019;

126 4th edition of the IEEE Workshop on ICT Solutions for eHealth, Barcelona, Spain, 26 June-3 July 2019; in conjunction with the 24th IEEE Symposium on Computers and Communications;

125 11th edition of the Conference on Telecommunications – ConfTele 2019, Lisbon, Portugal, 26-28 June 2019;

124 3rd IET International Conference on Technologies for Active and Assisted Living (TechAAL 2019), London, UK, 15 March 2019;

123 1st International Workshop on Blockchain in IoT, in the IEEE Global Communications Conference, Abu Dhabi, UAE, 9-13 December 2018;

122 5th International Conference on Physiological Computing Systems, PhyCS 2018, Seville, Spain, 19-21 September 2018;

121 5th International Conference on Physiological Computing Systems, Seville, Spain, 19-21 September 2018;

120 Sixth International Symposium on Control, Automation, Industrial Informatics and Smart Grid (ICAIS'18), Bangalore, India, 19-22 September 2018;

119 Symposium on Internet of Things, Fog Computing and Wireless Location Technologies (SIFL'18), Bangalore, India, 19-22 September 2018;

118 SENSORCOMM 2018, The Twelfth International Conference on Sensor Technologies and Applications, Venice, Italy, 16-20 September 2018;

117 2018 IEEE 14th International Conference on Intelligent Computer Communication and Processing (ICCP 2017), Cluj-Napoca, Romania, 6-8 September 2018;

116 ICORIS 2019 (2019 1st International Conference on Cybernetics and Intelligent System (ICORIS), Stikom Bali, Indonesia, 22-23 August 2019;

115 Second International Conference on Computing and Network Communications (CoCoNet'18), Astana, Kazakhstan, 15-17August 2018;

114 2017 IEEE 15th Student Conference on Research and Development (SCOReD), Putrajaya, Malaysia, 13-14 December 2017;

113 4th International Conference on Computer, Communication and Control Technology, Kota Kinabalu, Sabah, Malaysia, 19-21 April 2018;

112 The sixth edition of International Conference on Advances in Computing, Communications and Informatics (ICACCI-2017), Karnataka, India, 13-16 September 2017;

111 ICUMT 2017 – The 9th International Congress on Ultra Modern Telecommunications and Control Systems, Munich, Germany, 6-8 November 2017;

110 2017 IEEE 13th International Conference on Intelligent Computer Communication and Processing (ICCP 2017), Cluj-Napoca, Romania, 7-9 September 2017;

109 *2nd EAI International Conference on Computer Science and Engineering,* Bangkok, Thailand, 3-4 November 2017;

108 *2017 International Conference on Smart Cities, Automation & Intelligent Computing Systems (ICON-SONICS 2017)*, Yogyakarta, Indonesia, 8-10 November 2017;

107 *2nd EAI International Conference on Computer Science and Engineering,* Bangkok, Thailand, 3-4 Nov 2017;

106 *2017 International Conference on Emerging Electronic Solutions for IoT (ICEESI 2017)*, Penang, Malaysia, 9-10 October 2017;

105 *2017 2nd Applied Mathematics in Science and Engineering International Conference (APPEMSE),* Phuket, Thailand, 10-12 October 2017;

104 *2017 2nd Advanced Research in Engineering and Information Technology International Conference (AREITIC)*, Bangkok, Thailand, 5-7 September 2017;

103 *The fourth edition of the International Workshop on Enhanced Living EnvironMENTs, ELEMENT-2017, Workshop Co-Chair, in conjunction with ConTEL 2017, The 14th International Conference on Telecommunications,* Zagreb, Croatia (http://aapele.eu/element2017/), 28-30 June 2017;

102 *2017 2nd International Conference on Information in Business and Technology (I2BM) (I2BM'2017),* Penang, Malaysia, 18 -20 April 2017;

101 *4th International Conference on Physiological Computing Systems, PhyCS 2017,* Madrid, Spain, 28-29 July 2017;

100 *2016 IEEE International Symposium on Signal Processing and Information Technology (ISSPIT),* Lymassol, Cyprus , 12-14 December 2016;

99 *The 5th IEEE International Conference on Communication, Networks and Satellite, IEEE COMNETSAT 2016,* Surabaya, Indonesia, 8-10 December 2016;

98 *Smart Things for Active and Assisted Living (ST4AAL), 2nd EAI International Conference on Smart Objects and Technologies for Social Good,* Venice, Italy, 30 November–1 December 2016;

97 *First EAI International Conference on Computer Science and Engineering, Penang, Malaysia,* 11–12 November 2016;

96 *2016 International Symposium on Health and Medical Sciences (ISHAMS'2016),* Penang, Malaysia, 4-6 October 2016;

95 *IEEE 12th International Conference on Intelligent Computer Communication and Processing,* Cluj-Napoca, Romania, 8-10 September 2016;

94 *2nd International Workshop on Internet of Things for Ambient Assisted Living (IoTAAL), in conjunction with IEEE PIMRC 2016, Workshop Co-Chair,* Valencia, Spain, 04-Sep-16;

93 *3rd International Conference on Physiological Computing Systems, PhyCS 2016,* Lisbon, Portugal, 29-31 July 2016;

92 *Exploring Modelling Methods for Systems Analysis and Design working conference, EMMSAD16,* Ljubljana, Slovenia, 13-14 June 2016;

91 *7th International Conference on Ambient Intelligence (ISAMI'16) within PAAMS 2016,* Seville, Spain, 1-3 June 2016;

90 *2016 International Conference on Business, Economics, Management, Social Sciences, Art and Humanities (BEMSAHIC 2016),* Ural Federal University, Yekaterinburg, Sverdlovsk Oblast, Russia, 10-12 May 2016;

89 *2016 International Conference on Information in Business and Technology Management (I2BM),* Melaka, Malaysia, 26-28 January 2016;

88 *The 15th IEEE International Symposium on Signal Processing and Information Technology,* Abu Dhabi, UAE, 7-10 December 2015, ISSPIT 2015 ;

87 *GC'15-Workshop-IoTAAL (IEEE GC 2015 Workshop on Internet of Things for Ambient Assisted Living (IoTAAL)), IEEE Globecom,* Las Vegas, USA, 6-10 December 2015;

86 *ICEUBI2015-International Conference on Engineering-Engineering for Society,* Covilhã, Portugal, 2-4 December 2015;

85 *2015 International Conference on Computing and Network Communications (CoCoNet'15),* Trivandrum, Kerala, India, 16-19 December 2015;

84 *International Symposium on Health and Medical Sciences (ISHAMS 2015),* Krabi, Thailand, 1-3 December 2015;

83 *2015 International Symposium on Sciences and Mathematics (ISySM2015),* Bandung, Indonesia, 24-26 November 2015;

82 *ICCAT' 2015 (2015 International Conference on Computer Applications & Technology),* Rome, Italy, 5-7 November 2015;

81 *1st IET International Conference on Technologies for Active and Assisted Living (TechAAL 2015),* Kingston University, London, United Kingdom, 05-Nov-15;

80 *International Conferences on Instrumentation control, Cognitive science, Optics, Micro electro-mechanical system, and Information technology (ICACOMIT),* Bandung, Indonesia, 29-30 October 2015;

79 *2nd International Conference on Cognitive Internet of Things Technologies,* Rome, Italy, 26–27 October 2015;

78 *2015 IEEE Conference on Energy Conversion (CENCON 2015),* Johor Bahru, Malaysia, 19-21 October 2015;

77 *7th ICUMT 2015,* Brno, Czech Republic, 6-8 October 2015;

76 *The second edition of the International Workshop on Enhanced Living EnvironMENTs,* Workshop Co-Chair, 1-3 October 2015, Ohrid, Macedonia, ELEMENT-2015;

75 *2015 Progress in Applied Mathematics in Science and Engineering (PIAMSE),* Bali, Indonesia, 29-Sep-15;

74 *2015 International Symposium on Social Sciences, Arts and Humanities (SYSSARM),* Bali, Indonesia, 29-Sep-15;

73 *ETAI 2015 Society for Electronics, Telecommunications, Automation and Informatics,* Ohrid, Macedonia, 24-26 September 2015;

72 *International Conference on Control, Electronics, Renewable Energy, and Communications 2015 (ICCEREC 2015),* Bandung, Indonesia, 27-29 August 2015;

71 *Game Physics and Mechanics International Conference 2015,* 2015, Langkawi, Kedah, Malaysia, 25-27 August 2015;

70 *Fourth International Conference on Advances in Computing, Communications and Informatics (ICACCI-2015),* Kerala, India, 10-13 August 2015;

69 *Third International Symposium on Security in Computing and Communications (SSCC-2015),* Kerala, India, 10-13 August 2015;

68 *Second International Symposium on Computer Vision and the Internet (VisionNet'15),* Kochi, India, 10-13 August 2015;

67 *First International Conference on Computing in Mechanical Engineering (ICCME'15),* Kochi, India, 10-13 August 2015;

66 *2015 International Conference on Single Processing & Data Mining (ICSPDM' 2015),* Istanbul, Turkey, 26-28 July 2015;

65 *GSCIT' 2015, Global Summit on Computer & Information Technology,* Sousse, Tunisia, 11-13 June 2015;

64 *WSMEAP' 2015, World Symposium on Mechatronics Engineering & Applied Physics,* Sousse, Tunisia, 11-13 June 2015;

63 *2015 International Conference on Marine Science and Environmental Engineering (MAROCENET 2015),* Phuket, Thailand, 9-11 June;

62 *The IEEE 4th International Conference on Mobile Services 2015 (IEEE MS 2015)-Coimbra Satellite Session,* Coimbra, Portugal, 03-Jun-15;

61 *Renewable Energy and Green Technology International Conference 2015 (REEGETECH'2015),* Bali, Indonesia, 2-4 June 2015;

60 *2015 Advanced Research in Material Sciences, Manufacturing, Mechanical and Mechatronic Engineering Technology International Conference (AR4MET'2015),* Bali, Indonesia, 2-4 June;

59 *International Symposium on Ambient Intelligence (ISAmI'15),* Salamanca, Spain, 3-5 June 2015;

58 *2015 IC Engineering & Computational Innovative Sciences (ENCINS' 2015),* Casablanca, Morocco, 20-23 April 2015;

57 *2015 International Conference on e-Quality & e-Service Sciences (eQeSS 2015),* Dubai, UAE, 24-25 February 2015;

56 *2014 IEEE Conference on Biomedical Engineering and Sciences (IECBES),* Kuala Lumpur, Malaysia, 08-10 December 2014;

55 *2014 International Conference on Computer Applications & Aided Diagnosis (ICCAAD' 2014),* Algeria, 25-26 November 2014;

54 *The Sixth International Conference on Computational Intelligence and Communication Networks 2014 (CICN2014),* Bhopal, India, 14-16 November 2014;

53 *2014 International Conference on Industrial Electronics, Manufacturing, Control, Systems, and Informatics (IMACSI 2014),* Yogyakarta, Indonesia, 11-13 November 2014;

52 *2014 2nd International Conference on Robotics, Biomimetics, Intelligent Computational Systems (ROBIONETICS 2014),* Yogyakarta, Indonesia, 11-13 November 2014;

51 *The First International Conference on Cognitive Internet of Things Technologies,* Rome, Italy, 27-28 October 2014;

50 *6th ICUMT 2014,* St. Petersburg, Russia, 6-8 October 2014;

49 *2014 IEEE Symposium on Business, Engineering & Industrial Applications (ISBEIA 2014),* Kota Kinabalu, Malaysia, 28 September-1 October 2014;

48 *Third International Conference on Advances in Computing, Communications and Informatics (ICACCI 2014),* Delhi, India, 24-27 September 2014;

47 *The first edition of the International Workshop on Enhanced Living EnvironMENTs, ELEMENT-2014,* 23-25 September 2014, Würzburg, Germany, Workshop Co-Chair;

46 *2014 International Workshop on Wireless Sensors Networks for Mobile Health (WSN4Health'2014),* Rome, Italy, 8-10 September 2014;

45 *2014 International Conference on Intelligent Autonomous Agents, Networks and Systems (INAGENTSYS 2014),* Bandung, Indonesia, 19-21 August;

44 *The 2014 2nd International Conference on Technology, Informatics, Management, Engineering & Environment (TIME-E 2014),* Bandung, Indonesia, 19-21 August 2014;

43 *2014 International Colloquium on Sport Science, Exercise, Engineering and Technology (ICoSSEET 2014),* Penang, Malaysia, 7-9 April 2014;

42 *PhyCS 2014 International Conference on Physiological Computing Systems,* Lisbon, Portugal, 7-9 January 2014;

41 *ICEUBI2013-International Conference on Engineering UBI2013-Engineering for Economic Development,* Covilhã, Portugal, 27-29 November 2013;

40 *The Second International Conference on Global Health Challenges GLOBAL HEALTH 2013,* Lisbon, Portugal, 17-22 November 2013;

39 *IICP 2013-4th IEEE International Conference on Photonics 2013,* Melaka, Malaysia, 28-30 October 2013;

38 *The 2013 IEEE Symposium on Industrial Electronics & Applications,* Kuching, Malaysia, 22-25 September 2013;

37 *The 2013 IEEE Symposium on Business, Engineering and Industrial Applications,* Kuching, Malaysia, 22-25 September 2013;

36 *International Symposium on Control, Automation, Industrial Informatics and Smart Grid (ICAIS 2013),* Mysore, India, 24-25 August 2013;

35 *IEEE Symposium on Humanities, Science and Engineering 2013 (SHUSER 2013),* Penang, Malaysia, 23-25 June 2013;

34 *2013 International Conference on Technology, Informatics, Management, Engineering & Environment,* Bandung, Indonesia, 23-26 June 2013;

33 *2013 2nd IEEE Conference on Control, Systems & Industrial Informatics,* Bandung, Indonesia, 23-26 June 2013;

32 *IEEE Business Engineering and Industrial Applications Colloquium 2013 (IEEE BEIAC 2013),* Langkawi Island, Malaysia, 7-9 April 2013;

31 *IEEE EUROCON 2013,* Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia, 1-4 July 2013;

30 *4th International Symposium in Ambient Intelligence (ISAmI 2013),* 2013, Salamanca, Spain, 22-24 May;

29 *The Fourth International Conference on Networks & Communications (NETCOM-2012),* Chennai, India, 22-24 December;

28 *The 2012 IEEE CONFERENCE ON CONTROL, SYSTEMS & INDUSTRIAL INFORMATICS (ICCSII 2012),* Sharjah, United Arab Emirates, 18-20 December 2012;

27 *The 2012 IEEE Student Conference on Research and Development (SCOReD 2012),* Penang, Malaysia, 5-6 December 2012;

26 *The 2012 IEEE Colloquium on Humanities, Science and Engineering Research (CHUSER 2012),* Kota Kinabalu, Sabah, Malaysia, 3-4 December 2012;

25 *The 2012 IEEE International Conference on Power and Energy (PECON 2012),* Kota Kinabalu, Sabah, Malaysia, 2-5 December 2012;

24 *International Conference on Ultra Modern Communications (ICUMT 2012),* St Petersburg, Russia, 3-5 October 2012;

23 *AAL 2012, Living Usability Lab Workshop on AAL latest solutions, trends and applications,* Vilamoura-Algarve, Portugal, 1-4 of February 2012;

22 *INMIC 2011, 2011 IEEE 14th International Multitopic Conference,* Karachi, Pakistan, 22-24 of December 2011;

21 *ICEUBI2011-International Conference on Engineering UBI2011-Innovation and Development,* Covilhã, Portugal, 28-30 November 2011;

20 *EMERGING 2011, The Third International Conference on Emerging Network Intelligence,* 2011, under NexTech 2011, Lisbon, Portugal, November 20-25;

19 *International Conference on Ultra Modern Communications (ICUMT 2011),* 2011, Budapest, Hungary, October 5-7;

18 *The Fourth International Conference on Advances in Mesh Networks MESH 2011,* 2011, Nice/Saint Laurent du Var, France, August 21-27;

17 *The International Conference on Recent Advances in Technology, Engineering, Management and Science-ICRATEMS 2011,* Tiruchengodu, Tamil Nadu, INDIA, 4-6 March 2011;

16 *the 1st International Living Usability Lab Workshop on AAL Latest Solutions,* January 28-29, 2011, Rome, Italy, AAL 2011;

15 *the International Conference on Ultra Modern Communications (ICUMT 2010),* Moscow, Russia, 18-20 October 2010;

14 *The Second International Conference on Emerging Network Intelligence (EMERGING 2010),* Florence, Italy, 25-30 October 2010;

13 *The Seventh IEEE and IFIP International Conference on wireless and Optical communications Networks (WOCN2010),* Colombo, Sri Lanka, 6-8 September 2010;

12 *The Optical and Backbone Networks Track of the 19th International Conference on Computer Communications and Networks (ICCCN 2010),* ETH Zurich, Zurich, Switzerland, 2-5 August 2010;

11 *The 11th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD 2010),* University of Greenwich, London, United Kingdom, 9-11 June 2010;

10 *SocialNet'09 (The 2009 IEEE International Symposium on Social Computing and Networking),* Chengdu, China, 12-14 December 2009;

9 *The 2009 IEEE International Conference on Social Computing (SocialCom-09),* Vancouver, Canada, 29-31 August 2009;

8 *Co-chair of the Technical Program Committee of the First Asian Himalayas International Conference on Internet (AH-ICI2009),* Katmandu, Nepal, 3-5 November 2009;

7 *the International Conference on Ultra Modern Communications (ICUMT 2009),* S Petersburg, Russia, 12-14 October 2009;

6 *The Fifth European Conference on Universal Multiservice Networks (ECUMN 2009),* Silema, Malta, 11-16 October 2009;

5 *The 18th International Conference on Computer Communications and Networks (ICCCN 2009),* San Francisco, California, USA, 2-6 August 2009;

4 *CISTI 2009-4ª Conferência Ibérica de Sistemas e Tecnologias de Informação,* Póvoa do Varzim, Portugal, 17-20 July 2009;

3 *The 1st International Workshop on Traffic Monitoring and Analysis (TMA'09),* Aachen, Germany, 11-May-09;

2 *The 17th International Conference on Computer Communications and Networks,* St. Thomas, Virgin Islands, USA, 4-7 August 2008;

1 *The 23rd Annual ACM Symposium on Applied Computing,* Fortaleza, São Salvador, Ceará, Brazil., 16-20 March 2008.

Additional reviewing activities can be described as follows:

- Reviewer for the Mobile and Wireless Networks track at the 2010 IEEE Wireless Communications and Networking Conference (WCNC 2012), Paris, France, 1-4 April 2012;
- Reviewer for the IEEE GLOBECOM 2011 - Communication Software, Services, and Multimedia Applications Symposium, Houston, Texas, USA, 5-9 December 2011;
- Reviewer for The 7th International Conference on Network and Service Management (CNSM 2011), Paris, France, 24-28 October 2011;
- Reviewer for The 4th IEEE International Conference on Computer Science and Information Technology, ICCSIT 2011, Chengdu, China, 10-12 June 2011;
- Reviewer for The 5th ERCIM Workshop on eMobility, Vilanova i la Geltrú, Catalonia, Spain, 14 June 2011;
- Reviewer for the The 2nd International Symposium on Information Security (IS'07), Vilamoura, Algarve, Portugal, 26-27 November 2007;
- Reviewer for the Globecom 2007 - Performance Modeling, QoS and Reliability Symposium (GC'07 PMQRS), Washington DC, USA, 26-30 November 2007;
- Reviewer for the IEEE International Conference on Communications (ICC 2007), Glasgow, Scotland, 24-28 June 2007;
- Reviewer for the The 22nd Symposium on Applied Computing (ACM SAC 2007), Seoul, South Korea, 11-15 March 2007;
- Reviewer for The International Conference on Information Networking 2007 (ICOIN 2007), Estoril, Portugal, 23-25 January 2007;
- Reviewer for the IEEE Wireless Communications Networking Conference (WCNC 2006), Las Vegas, Nevada, USA, 3-6 April 2006.

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ANNEX C - Detailed teaching activities

The following tables contain the details of the teaching activities in higher education institutions (universities and polytechnic institutes) since 2007/2008 until the current date. Recently taught curricular units are placed at the top of the table list. Table 18 shows the Curricular Units taught in PhD programs, Table 19 shows the data for MSc courses and Table 20 shows data for BSc courses.

The first column contains the English name of the curricular unit and its corresponding curricular year within the course plan; it also contains information on the type of classes, where T stands for Theoretical classes, OT stands for Tutorial Laboratory, and P for Practical classes. The second and third columns contain the type and name of the course and the institution where the course was taught. The fourth column contains a description of the role taken while teaching the curricular unit: C stands for Coordinator and TM stands for Team Member, *i.e.*, in this case the curricular unit was coordinated by another colleague.

Regarding the abbreviations for the Scientific Areas, the following were used:

AT = Advanced Topics

CN = Computer Networks

D = Databases

MI = Medical Informatics

Progr = Programming

Proj = Project

SE = Software Engineering

The sub-table underneath has data aggregated in two lines and a variable number of rows. The first line shows the year and semester the unit was taught, and the second line contains the number of students enrolled in each term; for data prior to 2010, the values are approximate.

Table 18 – Details for teaching activities since 2007, for Units taught in PhD Courses.

Unit, curricular year, type of class, Scientific Area	**PhD Course**	**University**	**Role**
Ambient Assisted Living, 1st year, OT, MI	Computer Science and Engineering	UBI	C

Year, Semester	2021/22, 1st	2020/21, 1st	2019/20, 1st	2018/19, 1st	2017/18, 1st	2016/17, 1st
Number of Students	2	2	1	2	3	2
Year, Semester	2015/16, 1st	2014/15, 1st				
Number of Students	8	8				

Unit, curricular year, type of class, Scientific Area	**PhD Course**	**University**	**Role**
Topics on Biosignal Processing, 1st year, OT, Progr.	Computer Science and Engineering	UBI	C

Year, Semester	2021/22, 1st	2020/21, 1st	2019/20, 1st	2018/19, 1st	2017/18, 1st	2016/17, 1st
Number of Students	2	2	2	3	1	1
Year, Semester	2015/16, 1st	2014/15, 1st				
Number of Students	8	8				

Unit, curricular year, type of class, Scientific Area	PhD Course	University	Role
Advanced Topics in Computer Science, 1st year, T+P, AT	Computer Engineering, Software Engineering track	Addis Ababa University (AAU), Ethiopia	C

Year, Semester	2017/18, 2nd	2015/16, 1st	2012/13, 1st	2011/12, 1st
Number of Students	4	6	6	5

Table 19 – Details for teaching activities since 2007, for Units taught in MSc Courses.

Unit, curricular year, type of class, Scientific Area	MSc Course	University	Role
Modelling and Simulation in Medicine, 1st year, T+P, BE	Biophysical and Biomedical Engineering	FCUL	C

Year, Semester	2022/23, 2nd
Number of Students	35

Unit, curricular year, type of class, Scientific Area	MSc Course	University	Role
Communications Protocols, 1st year, T+P, CN	Computer Science Engineering	UBI	C

Year, Semester	2020/21, 1st
Number of Students	36

Unit, curricular year, type of class, Scientific Area	MSc Course	University	Role
Network Planning and Administration, 1st year, T+P, CN	Computer Science Engineering	*Universidade do Mindelo*, Cape Verde	C

Year, Semester	2019/20, 1st
Number of Students	10

Unit, curricular year, type of class, Scientific Area	MSc Course	University	Role
Administration of Networked Systems, 1st year, T+P, CN	Computer Science and Engineering	UBI	C

Year, Semester	2019/20, 1st	2017/18, 1st
Number of Students	52	30

Unit, curricular year, type of class, Scientific Area	MSc Course	University	Role
Cloud Computing, 1st year, T+P, CN	Computer Science and Engineering	UBI	C

Year, Semester	2018/19, 1st
Number of Students	33

Unit, curricular year, type of class, Scientific Area	MSc and BSc Integrated Course	University	Role
Initiation to Medicine, 1st year, T, MI	Medicine	UBI	C

Year, Semester	2019/2020	2018/19, 1st
Number of Students	162	161

Unit, curricular year, type of class, Scientific Area	MSc Course	University	Role

Ubiquitous Computing, 1st year, T+P, CN				Mobile Computing	IPG	C
Year, Semester	2018/19, 1st	2013/14, 2nd	2012/13, 1st			
Number of Students	12	8	13			

Unit, curricular year, type of class, Scientific Area			**MSc Course**	**University**	**Role**
Analysis of Biomedical Signals, 1st year, T+P, Progr			Bioengineering	UBI	C
Year, Semester	2017/18, 1st	2016/17, 1st			
Number of Students	1	7			

Unit, curricular year, type of class, Scientific Area			**MSc Course**	**University**	**Role**
Mobile Computation for Health, 1st year, T+P, Progr			Bioengineering	UBI	C
Year, Semester	2017/18, 1st	2016/17, 1st			
Number of Students	1	7			

Unit, curricular year, type of class, Scientific Area	**MSc Course**	**University**	**Role**
Implementation, 1st year, T+P, MI	Care and Technology	European MSc consortium led by Fontys University, Nederlands	C
Year, Semester	2016/17, 1st		
Number of Students	7		

Unit, curricular year, type of class, Scientific Area	**MSc Course**	**University**	**Role**
Networks Engineering, 1st year, T+P, CN	Computer Science and Engineering	UBI	C
Year, Semester	2016/17, 2nd		
Number of Students	37		

Unit, curricular year, type of class, Scientific Area	**MSc Course**	**University**	**Role**
Safety Issues and Regulations, 1st year, T+P, MI	Care and Technology	European MSc consortium led by Fontys University, Nederlands	C
Year, Semester	2016/17, 1st		
Number of Students	7		

Unit, curricular year, type of class, Scientific Area	**MSc Course**	**University**	**Role**
Cloud and Data Center Technologies, 1st year, T+P, CN	Computer Science and Engineering	UBI	C
Year, Semester	2014/15, 2nd		
Number of Students	26		

Unit, curricular year, type of class, Scientific Area	**Post-graduate Course**	**University**	**Role**
Telecommunication Networks, 1st year, T+P, CN	Communication and Information Technologies for the Telecommunications Area	UBI	C

Year, Semester	2014/15, 1st	2013/14, 1st
Number of Students	18	15

Unit, curricular year, type of class, Scientific Area	MSc Course	University	Role
Analysis of Information Systems, 1st year, T+P	Computer Science and Engineering	UBI	C

Year, Semester	2012/13, 1st	2010/11, 1st
Number of Students	35	16

Unit, curricular year, type of class, Scientific Area	MSc Course	University	Role
Multimedia Data Processing, 1st year, T+P, Progr	Software Engineering and Information Systems	ULHT	C

Year, Semester	2011/12, 2nd	2010/11, 2nd
Number of Students	8	7

Unit, curricular year, type of class, Scientific Area	Post-Graduation Course	University	Role
Software Requirements and Tests Engineering, 1st year, T+P, SE	PAGSI - Advanced Program of Management of Information Systems	ULHT	C

Year, Semester	2010/11, 2nd	2008/09, 2nd
Number of Students	8	3

Unit, curricular year, type of class, Scientific Area	MSc Course	University	Role
Integration of Mobile Networks and Multimedia Resources, 2nd year, T+P, CN	Computer Engineering and Information Systems	ULHT	C

Year, Semester	2009/10, 2nd	2008/09, 2nd
Number of Students	3	7

Unit, curricular year, type of class, Scientific Area	MSc Course	University	Role
Software Requirement and Tests Engineering, 1st year, T+P, SE	Software Engineering and Information Systems	ULHT	C

Year, Semester	2007/08, 2nd
Number of Students	15

Table 20 – Details for teaching activities since 2007, for Units taught in BSc Courses.

Unit, curricular year, type of class, Scientific Area	MSc Course	University	Role
Administration of Networked Systems, 3st year, T+P, CN	Computer Science and Engineering	UBI	C

Year, Semester	2021/22, 2nd	2020/21, 2nd
Number of Students	84	93

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
Computer Networks, 2nd or 1st year (from 2020 onwards), T+P, CN	Computer Science and Engineering	UBI	C

Year, Semester	2021/22, 2nd	2020/21, 2nd	2019/20, 1st	2018/19, 1st	2017/18, 1st	2016/17, 1st
Number of Students	162	182	83	71	77	80
Year, Semester	2015/16, 1st	2014/15, 1st				
Number of Students	65	62				

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
Computers and Programming, 2nd year, T+P, Progr	Biomedical Sciences	UBI	C

Year, Semester	2021/22, 2nd	2020/21, 2nd	2019/20, 1st	2018/19, 1st
Number of Students	49	49	40	35

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
Networks and Internet Services, 2nd year, or 1st year from 2020 onwards, T+P, CN	Web Informatics	UBI	C

Year, Semester	2021/22, 2nd	2020/21, 2nd	2019/20, 2nd	2018/19, 2nd	2017/18, 2nd
Number of Students	42	52	42	39	42
Year, Semester	2016/17, 2nd	2014/15, 2nd			
Number of Students	38	21			

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
Final Project, 3rd year, P, Proj	Computer Science and Engineering *and* Management Informatics	ULHT	C

Year, Semester	2017/18, 2nd	2017/18, 1st	2016/17, 2nd	2016/17, 1st	2015/16, 2nd	2015/16, 1st
Number of Students	1	1	1	1	2	1
Year, Semester	2014/15, 2nd	2014/15, 1st	2013/14, 1st	2012/13, 2nd	2011/12, 2nd	2011/12, 1st
Number of Students	2	1	2	1	12	7
Year, Semester	2010/11, 2nd	2009/10, 2nd	2009/10, 1st	2008/09, 2nd	2007/08, 1st	
Number of Students	17	18	36	26	11	

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
Programming, 2nd year, T, Progr	Biomedical Sciences *and* Bioengineering	UBI	C

Year, Semester	2017/18, 1st	2016/17, 1st	2015/16, 1st
Number of Students	62	64	140

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**

Computer Networks Technologies, 1st year, T+P, CN	Information Systems and Technologies	UBI	C

Year, Semester	2014/15, 2nd	2013/14, 2nd	2010/11, 2nd
Number of Students	10	37	44

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
Project, 3rd year, P, Proj	Computer Science and Engineering	UBI	C

Year, Semester	2014/15, 2nd
Number of Students	40

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
Medical Informatics, 1st year, T+P, MI	Bioengineering	UBI	C

Year, Semester	2013/14, 2nd
Number of Students	4

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
Networks and Internet Services, 2nd year, T+P, CN	Computer Science and Engineering	UBI	C

Year, Semester	2013/14, 2nd	2012/13, 2nd	2010/11, 2nd
Number of Students	60	48	62

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
System Administration, 3rd year, T+P, CN	Information Systems and Technologies	UBI	C

Year, Semester	2013/14, 1st
Number of Students	12

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
Internet Technologies, 1st year, T+P, CN	Computer Science and Engineering, Information Systems and Technologies *and* Sport Sciences	UBI	C

Year, Semester	2012/13, 2nd	2011/12, 2nd	2009/10, 2nd
Number of Students	79	91	120

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
Distributed Systems, 2nd year, T+P, Progr	Computer Science and Engineering	UBI	C

Year, Semester	2011/12, 2nd
Number of Students	43

Unit, curricular year, type of class, Scientific Area	**BSc Course**	**University**	**Role**
Programming Languages 1, 1st year, P, Progr	Computer Science and Engineering	ULHT	TM

Year, Semester	2011/12, 2nd	2010/11, 2nd	2009/10, 2nd	2008/09, 2nd	2007/08, 2nd

Number of Students	30	44	51	68	51

Unit, curricular year, type of class, Scientific Area	BSc Course	University	Role
Software Engineering, 3rd year, T+P, SE	Management Informatics	ULHT	C

Year, Semester	2011/12, 2nd	2010/11, 2nd	2008/09, 2nd	2007/08, 2nd
Number of Students	38	45	26	22

Unit, curricular year, type of class, Scientific Area	BSc Course	University	Role
Foundations on Programming, 1st year, P, Progr	Management Informatics *and* Computer Science	ULHT	TM

Year, Semester	2011/12, 1st	2010/11, 1st	2009/10, 1st
Number of Students	40	41	73

Unit, curricular year, type of class, Scientific Area	BSc Course	University	Role
Systems Analysis, 3rd year, T+P, SE	Information Systems and Technologies	UBI	C

Year, Semester	2011/12, 1st
Number of Students	19

Unit, curricular year, type of class, Scientific Area	BSc Course	University	Role
Complements on Networks, 3rd year, P, CN	Computer Science Engineering	ULHT	TM

Year, Semester	2009/10, 2nd	2008/09, 2nd
Number of Students	42	32

Unit, curricular year, type of class, Scientific Area	BSc Course	University	Role
Communication and Information Systems, 1st year and 4th year, T+P, MI	Nursing	IPG – ESG	C

Year, Semester	2008/09, 2nd
Number of Students	98

Unit, curricular year, type of class, Scientific Area	BSc Course	University	Role
High Speed Networks, 3rd year, T, CN	Computer Science Engineering	UAL	C

Year, Semester	2008/09, 1st
Number of Students	35

Unit, curricular year, type of class, Scientific Area	BSc Courses	University	Role
Database Modelling, 2nd year, T, D	Computer Science Engineering, Management Informatics, Informatics *and* Computer Science	UAL	C

Year, Semester	2008/09, 1st	2007/08, 1st
Number of Students	48	138

Unit, curricular year, type of class, Scientific Area	BSc Courses	University	Role
Programming Languages 2, 2nd year, P, Prog	Management Informatics *and* Computer Science	ULHT	TM

Year, Semester	2008/09, 1st	2007/08, 1st
Number of Students	73	69

Unit, curricular year, type of class, Scientific Area	BSc Courses	University	Role
Foundations on Programming, 1st year, T, Progr	Management Informatics *and* Computer Science	ULHT	C

Year, Semester	2007/08, 1st
Number of Students	139

Unit, curricular year, type of class, Scientific Area	BSc Course	University	Role
Networks and Communications, 2nd year, P, CN	Computer Science Engineering	UAL	TM

Year, Semester	2007/08, 2nd
Number of Students	24

Unit, curricular year, type of class, Scientific Area	BSc Course	University	Role
Network and System Management, 3rd year, P, CN	Computer Science Engineering	UAL	TM

Year, Semester	2007/08, 2nd
Number of Students	16

Table 21 contains the teaching activities related to professional training or to courses taught in the context of Cisco Academies. The first column contains the dates of the start and finish of the course (start month-end month, year), the second column contains the number of students, the third column contains the number of hours taught, and the fourth and fifth columns contain the name of the course and the location where the course was taught. In this list it was also included the 2015 Introduction to Python summer school course, taught to a class of six high school students.

Table 21 – Details for additional teaching activities since 2007.

Date (start-end months, year or month year, or data start date end)	**Number of students**	**Number of hours**	**Course**	**Location**
July and August 2020	21	24	Applications for AAL (Summer course funded by FCT *Verão com Ciência*, IoT applications for health)	*Instituto Politécnico de Viseu,* Viseu, Portugal
October 2019	12	17.5	CISCO CCNA Introduction to Networks	*CFIUTE*
5 July 2019	21	4	*Programação e Modelagem de objetos e sua impressão em impressora 3D*	UBI

Date (start-end months, year or month year, or data start date end)	**Number of students**	**Number of hours**	**Course**	**Location**
10 March 2017	10 + 15 high school teachers	3 + 3	*Utilização de ferramentas gratuitas para suporte a actividades lectivas*	ESCM
10-11, 2016 4-5, 2016	16 10	17.5 17.5	Linux Essentials	CFIUTE
6-7, 2015	6	20	Introduction to Python	UBI
9-11, 2015	25	60	Systems Analysis	CFIUTE
8-8, 2015	30	24	IPv6	*Universiti Teknologi Malaysia, Johor Bauru, Malaysia*
2-3, 2016 3-4, 2015 2-3, 2015 10-11, 2013	11 12 14 12	17.5 35 17.5 17.5	CISCO CCNA Introduction to Networks	*CFIUTE*
5-6, 2015 10-11, 2015	12 12	17.5 17.5	CISCO CCNA Connecting Networks	CFIUTE
6-7, 2015	12	17.5	CISCO CCNA Scaling Networks	CFIUTE
1-4, 2014	12	17.5	CISCO CCNA Routing and Switching Essentials	CFIUTE
10-11, 2013	10	17.5	CISCO CCNA Routing Protocols	CFIUTE
3-4, 2013	10	17.5	CISCO CCNA LAN Switching and Wireless	CFIUTE
11-12, 2012	14	17.5	CISCO CCNA Network Fundamentals	CFIUTE
1-4, 2012	13	60	Database Modelling (*Modelação de Bases de Dados*) for high school teachers	*Centro de Formação da Associação de Escolas da Beira Interior*

Additional teaching activities can be described / summarized as follows:

2011/2012: instructor for the Database Modelling module (*Modelação de Bases de Dados*) at the post-secondary level V technologic specialization course (*Curso de Especialização Tecnológica - CET*) on the Information Systems and Network Management (Gestão de Redes e Sistemas de Informação) course;

2011/2012: instructor for the Computer Systems and Network Management module (*Gestão de Redes e Sistemas Informáticos*) at the post-secondary level V technologic specializations course (*Curso de Especialização Tecnológica - CET*) on the Information Systems and Network Management (*Gestão de Redes e Sistemas de Informação*) course;

Janeiro 2011-Abril 2011: instructor at the *Centro de Formação da Associação de Escolas da Beira Interior* on the Internet Technologies (*Tecnologias da Internet*) course for 15 high-school teachers;

April 2002 - August 2002: Computer Science Teacher at the *Escola Secundária Campos Melo*, Covilhã, Portugal;

2007/2008: instructor for the Computational Systems module (*Sistemas de Computação*) at the post-secondary level V technologic specializations course (*Curso de Especialização Tecnológica - CET*) on Software Development and Systems' Administration (*Desenvolvimento de Software e Administração de Sistemas*) course;

2007/2008: instructor for the Computer Network Security module (*Segurança de Redes Informáticas*) at the post-secondary level V technologic specializations course (*Curso de Especialização Tecnológica - CET*) on Software Development and Systems' Administration (*Desenvolvimento de Software e Administração de Sistemas*) course;

2005/2006: instructor at the Systems and Networks Administration and Management module (*Administração e Gestão de Redes e Sistemas*) at the post-secondary level V technologic specializations course (*Curso de Especialização Tecnológica - CET*) on the Instalation and Maintenance of Networks and Computer Systems (*Instalação e Manutenção de Redes e Sistemas Informáticos*) course;

October 1987 - August 1994: Computer Science Teacher and Computer Science Group Leader at the *Frei Heitor Pinto* High School (*Escola Secundária Frei Heitor Pinto*), Covilhã, Portugal.

ANNEX D – Questions on the students' inquiries regarding quality assessment of classes

The following tables contain the questions presented to students regarding their assessment of the quality of the teaching activities. Table 22 contains the original questions in Portuguese and their translation to English for the questionnaire that was applied until 2013, and Table 23 contains the version that is being applied from 2014 to the current day, both used at the University of Beira Interior.

Table 22 – Statements in quality assessment questionnaires, 2010/2011 to 2012/2013.

Original statement in Portuguese	English translated statement
1. *O/A docente cumpre o horário estabelecido para as aulas*	The teacher respects the class schedule
2. *O/A docente está disponível para atender/apoiar os estudantes no horário estabelecido*	The teacher is available to talk to / support students in the defined office hours
3. *O/A docente aborda com clareza os conteúdos programáticos*	The teacher addresses clearly the course subjects
4. *O/A docente dedica aos conteúdos programáticos o tempo suficiente para a sua compreensão*	The teacher gives the course subjects the adequate amount of time to allow its comprehension
5. *Nas suas explicações, o/a docente tem em conta o nível de conhecimentos dos estudantes*	In his/her explanations, the teacher keeps in mind the level of knowledge of the students
6. *As aulas estão bem preparadas e organizadas*	Classes are well prepared and organized
7. *O/A docente estimula a participação e o pensamento crítico dos estudantes*	The teacher stimulates student's participation and critical thinking
8. *O/A docente estabelece uma relação de respeito com os estudantes*	The teacher establishes a relation of respect with the students
9. *O/A docente analisa com os estudantes os resultados da avaliação e esclarece dúvidas*	The teacher analyses the results of the evaluation with the students and clears existing doubts
10. *Em geral, estou satisfeito(a) com a lecionação do(a) docente*	In general, I am happy with this teacher's classes

Table 23 – Statements in quality assessment questionnaires, 2013/2014 onward.

Original statement in Portuguese	English translated statement
1. *Estabelecimento das regras de funcionamento e de avaliação da UC, no início do semestre/ano*	Establishment of the working and assessment rules of the curricular unit at the beginning of the year
2. *Organização e estruturação dos conteúdos e atividades da UC*	Organization and structure of the contents and activities of the curricular unit
3. *Clareza na exposição dos conteúdos programáticos*	Clarity while discussing the curricular unit syllabus
4. *Cumprimento dos horários estabelecidos para as aulas*	Respect of the class schedule
5. *Promoção da reflexão crítica dos estudantes*	Promotion of the critical thinking of the students
6. *Disponibilidade para o atendimento aos estudantes*	Availability to receive students in office hours
7. *Utilização das tecnologias de informação e comunicação (Moodle, páginas web, e-learning, etc.)*	Use of information and communication technologies (Moodle, web pages, e-learning, *etc*.)
8. *Respeito pelos estudantes*	Respect for students
9. *Cumprimento das regras de funcionamento e de avaliação acordadas com os estudantes*	Abiding the working and assessment rules agreed with the students
10. *Apreciação global do desempenho do docente*	Overall assessment of the performance of the teacher

ANNEX E - Detailed advisory of students for the curricular units of Project, Internship, or Seminar

He is or was advisor for the final project curricular unit for the following Bachelor of Science degree students:

72 – Guilherme Almeida, Computer Science and Engineering BSc student, "*Aplicação móvel para control de um Smartphone via SMS*", UBI, July 2021;

71 Jaime Oliveira, Computer Science and Engineering BSc student, "Aplicação móvel para deteção de inatividade no contexto de Ambient Assisted Living", UBI, July 2020;

70 Carlos Robalinho, Web Informatics BSc student, "Plataforma de interface com sistema de recolha de informações e alarmes de automóveis", UBI, July 2020;

69 Rodrigo Rebelo, Computer Science and Engineering BSc student, "Plataforma de monitorização e controlo de rega para agricultura de precisão", UBI, July 2020;

68 Bruno Guedelha, Web Informatics BSc student, "Aplicação móvel para toque de chamada e localização de telefones perdidos", UBI, July 2020;

68 Hiro Andrade, Web Informatics BSc student, "Plataforma móvel de apoio a pacientes diabéticos";

67 João Silva, Web Informatics BSc student, "Aplicação móvel para activação de som e toque de um terminal móvel via SMS", UBI, July 2020;

66 Rui Faria, Computer Science and Engineering BSc student, "*Plataforma móvel para comércio circular de roupa* (Mobile platform for the circular trade of clothing)," UBI, July 2019;

65 Bruno Tavares, Computer Science and Engineering BSc student, "*Plataforma móvel para monitorizaçao e planeamento de treino físico* (Mobile platform for monitoring and planning of physical training)," UBI, July 2019;

64 Gonçalo Pereira, Computer Science and Engineering BSc student, "*Plataforma móvel para monitorização de peso de pacientes cardíacos* (Mobile platform for cardiac patients weight monitoring)," UBI, July 2019;

63 José Ferreira, Computer Science and Engineering BSc student, "*Identificação de atividades diárias utilizando o método* AdaBoost (Daily activity identification using AdaBoost)," UBI, July 2019;

62 Inês Lopes, Computer Science and Engineering BSc student, "*Plataforma WEB para comércio circular de roupa* (Mobile platform for circular trade of clothing)," UBI, July 2019;

61 Daniel Barata Pereira, Computer Science and Engineering BSc student, "*Aplicação móvel para monitorização e registo de eventos relacionados com a Diabetes* (Mobile application to record and monitor Diabetes related events)," UBI, July 2018;

60 Pedro Jorge Matos, Computer Science and Engineering BSc student, "*Programa de suporte à gamificação em unidades* curriculares (Application to support gamification in curricular units)," UBI, July 2018;

59 Nuno Filipe Santos Aparício, Computer Science and Engineering BSc student, "*Aplicação móvel para toque de chamadas e* localização *de telefones perdidos* (Mobile application to call ringing and location of lost mobile phones)," UBI, July 2018;

58 João Miguel Gomes Vieira, Computer Science and Engineering BSc student, "*Aplicação móvel para* web SMS (Mobile application for Web SMS)," UBI, July 2018;

57 João Martins, Computer Science and Engineering BSc student, "*Estudo de uso de Multihoming IPv6* (Study of multi-homing in IPv6)," UBI, July 2017;

56 Kevin Clemente, Computer Science and Engineering BSc student, "S*istema de gestão de acessos a laboratório* (Laboratory access management system)," UBI, July 2017;

55 João Vilelas, Computer Science and Engineering BSc student, "*Aplicação para determinação de uma área em imagem termográfica* (Application to determine the area in a thermography)," UBI, July 2017;

54 Marco Cassapo, Computer Science and Engineering BSc student, "*Plataforma de avaliação de desempenho de comunicações em rede para IPv4 e IPv6* (Platform to assess the performance of IPv4 and IPv6 communications)," UBI, July 2017;

53 Ana Bárbara Matos, Computer Science and Engineering BSc student, "Criação de cenários de aprendizagem em Redes de Computadores (Creation of scenarios for learning Computer Networks)," UBI, July 2016;

52 Rui Santos, Computer Science and Engineering BSc student, "*Análise de som doméstico no contexto de* Ambient Assisted Living (Domestic sound analysis in the context of Ambient Assisted Living)," UBI, July 2016;

51 João Ribeiro, Computer Science and Engineering BSc student, "*InfraEstrutura de gestão e endereçamento* IPv6 (Management infrastructure for IPv6)," UBI, July 2016;

50 Sofia Alexandra Ramos Ambrósio, Bioengineering BSc student, seminar on "Algorithms for motif discovery in genomic DNA sequences," co-supervisor, UBI, June 2016;

49 Gil da Graça Dias, Bioengineering BSc student, seminar on "Collection and Analysis of Biosignals in Swimming," co-supervisor, UBI, June 2016;

48 Sandra Marisa Vieira Reis, Bioengineering BSc student, seminar on "*Uso de sensores no teste* Timed up and Go *para avaliação de idosos* (Use of sensors in the Timed Up and Go test for elderly assessment," co-supervisor, UBI, June 2016;

47 Inês Vicente Alexandre, Bioengineering BSc student, seminar on "*Análise de emoções através da visualização de imagens* (Emotion analysis through images visualization)," supervisor, UBI, June 2016;

46 Hugo Jorge, Tiago Reis, Management Informatics BSc students, "Microsoft Dynamics CRM 2015 System Requirements / Implementation," BSc degree in Management Informatics, ULHT, December 2015;

45 Alexandre Janeiro, Cláudia Janeiro, Management Informatics BSc students, "TechWeb-Plataforma Web de Apoio à Organização de Conferências Cientificas (TechWeb-Science Conferences Organization Support Web Platform)," ULHT, September 2015;

44 David Mota, Computer Science and Engineering BSc student, "Technology Radar," UBI, June 2015;

43 Renato Carvalho, Computer Science and Engineering BSc student, "Innovation Harvesting Tool," UBI, June 2015;

42 Davide Barruncho, Computer Science and Engineering BSc student, "*Chamar Táxi* (Taxi Call)," ULHT, November 2014;

41 Celina Alexandre, Computer Science and Engineering BSc student, "*Plataforma de monitorização de uma rede de transportes públicos* (Public transport monitoring platform)," UBI, July 2014;

40 Fábio Cabral, Computer Science and Engineering BSc student, "Mobile application for collection of accelerometer data from smartphones in the context of Ambient Assisted Living," UBI, July 2014;

39 Ricardo Sá, Computer Science BSc Engineering student, "*Análise da possibilidade de uso de Eulerian Video Magnification em sistemas de análise de variação de vascularização no contexto de Ambient Assisted Living* ("Analysis of the possibility of use of Eulerian Video Magnification for vascularization variation analysis systems for Ambient Assisted Living"), UBI, July 2014;

38 Hugo Alexandre Antunes Rodrigues, Computer Science and Engineering BSc student, "Tool for Analysis of the Movements During Sleep in the context of Ambient Assisted Living," UBI, July 2014;

37 João Pedro Veiga da Silva e Veiga Ferro, Computer Science and Engineering BSc student, "*A computação ubíqua, a Internet das Coisas e a Internet do Futuro* (Ubiquitous computing, the Internet of Things and the Internet of the Future)," ULHT, November 2013;

36 Rui Filipe Pereira dos Santos, Computer Science and Engineering BSc student, "*Aplicação móvel para o exercício de caminhar em linha reta no contexto de Ambient Assisted Living* (Creation of a mobile application to support the exercise of walking on a straight line)," UBI, July 2014;

35 Selma Pinho, Bioengineering BSc student, seminar on "*Deteção do sono e/ou relaxamento pela medição de atividade muscular do complexo muscular afeto à coluna vertebral*," supervisor, UBI, June 2014;

34 Rui Filipe Almeida Costa, Computer Science and Engineering BSc student, "*Criação de uma plataforma móvel de e-learning* (Creation of a mobile e-learning platform)," UBI, June 2013;

33 André Lourenço, Computer Science and Engineering BSc student, "*Criação de uma plataforma* Web *para gestão de leilões dinâmicos* on-line (Creation of a web platform for the management of dynamic auctions)," UBI, June 2013;

32 Fernando Jesus, Computer Science and Engineering BSc student, "*Desenvolvimento de uma aplicação para* tablet *de avaliação de fatores de risco no âmbito de segurança, higiene e saúde no trabalho* (Development of a tablet application to evaluate risk factors on safety, hygiene and health in work)," UBI, June 2013;

31 Carlos Alberto Cabral Vitória Ferrão Lopes, Computer Science and Engineering BSc student, "*Criação de uma plataforma móvel de monitorização de aprendizagem para escolas de condução* (Creation of a mobile platform for the monitoring of learning in driving schools)," UBI, June 2013;

30 Rafael Sereno, Computer Science and Engineering BSc student, "*Gestão e acesso remoto a filas de espera* (Management and remote access to queues)," UBI, Junho 2013;

29 Adilson da Silva and Maria Gabriela Rio, Computer Science and Engineering BSc student, "GestOn *Site de Acompanhamento de Financiamento* (GestOn-Financing reporting web site)," ULHT, October 2012;

28 Erivaldo Renato Camarada da Silva, Computer Science and Engineering BSc student, "Cloud computing report," ULHT, October 2012;

27 João Espirito Santo and André Restolho, Computer Science and Engineering BSc student, "*Portal de gestão de tutorias* (Tutoring management portal)," ULHT, July 2012;

26 Cláudio António, Computer Science and Engineering BSc student, "*Interface Web Mobile para serviços NETPA* (Web mobile application for NETPA services)," ULHT, July 2012;

25 Carlos Silva and David Oliveira, Computer Science and Engineering BSc student, "*Virtualização e Green Computing* (Virtualization and Green Computing)," ULHT, July 2012;

24 Paulo Fernandes, Computer Science and Engineering BSc student, "*Aplicação de análise de dados de bolsa* (Stock market data analysis application)," ULHT, July 2012;

23 José Ferreira and Marco Reis, Computer Science and Engineering BSc student, "*Aplicação de gestão de Instituições Particulares de Solidariedade Social* (Management application for private institutions for social solidarity)," ULHT, July 2012;

22 Rafael Gonçalves Couto, Computer Science and Engineering BSc student, "SIMTEV Interaction system for lifestyles monitoring and training," UBI, July 2012;

21 Samuel Alves, Computer Science and Engineering BSc student, "*Gestão da iluminação de um edifício* (Lighting management for a building)," UBI, July 2012;

20 Pedro Jorge Madeira Tavares, Computer Science and Engineering BSc student, "*Sinais fisiológicos e algoritmo de batimentos cardíacos em têxteis inteligentes* (Physiological Signals and heart beat detection algorithm for intelligent textiles)," UBI, July 2012;

19 Luís Filipe Carvalho Geraldes, Computer Science and Engineering BSc student, "*Desenvolvimento de um Lock Bag através de um eléctrodo têxtil na plataforma Arduíno* (Development of a lock bag using textile electrodes and an Arduino platform)," UBI, July 2012;

18 Paulo Pires, Computer Science Engineering BSc student, "*Sistema Integrado de Gestão de Acessos e Registo Regular de Actividades* (Integrated Access Management and Activities Registry System)*,"* ULHT, July 2011;

17 Carlos Pimentel, Ricardo Bessa, Computer Science Engineering BSc student, "*Criação de uma versão do IPCOP produzida no contexto universitário português* (Development of an academic version of IPCOP)," ULHT, July 2011;

16 Paulo Matos, Computer Science Engineering BSc student, "*Gestão de Informação biblio-económica de clientes externos* (Biblio-economic information management for external clients)," ULHT, July 2011;

15 Mafalda Grilo, João Conceição, Computer Science Engineering BSc students, "*Rede Social Lusofónicos* (Lusophone social network)," degree on Computer Science Engineering, ULHT, July 2011;

14 Lino José, Computer Science Engineering BSc student, "*Chaveiro em RFID* (RFID keylocker)," ULHT, July 2011;

13 Edmar Assunção, Melkisedek Pedro Bequengue, Computer Science Engineering BSc students, "*Aplicação Web para gestão de catálogos e conteúdos* (Web application for catalog and content management)," ULHT, July 2011;

12 João Miguel da Costa Aparício, Computer Science and Engineering BSc student, "*Ferramenta de cartografia bio-fisiológica* (Tool for bio-physiologic cartography)," Degree on Computer Science and Engineering, UBI, 2010/2011;

11 Micael João da Silva Santos, Computer Science and Engineering BSc student, "*Registo e Sincronização de Dados Fisiológicos e de Dados de Geolocalização* (Record and synchronization of physiologic and geolocation data)," UBI, July 2011;

10 Valdemiro Évora, Management Informatic BSc student, "Qualidade de Experiência da Utilização da Internet em Cabo Verde (Quality of Experience on Internet use in Cape Verde)," ULHT, July 2011;

9 Ricardo Santana, Fernando Santos, Management Informatics BSc students, "*Ferramenta de suporte à força de vendas* (Tool for work-force support)," ULHT, July 2010;

8 Vitor Fernandes, Rui Santos, Computer Science Engineering BSc students, "*Ferramenta de apoio integrado ao grafismo de sinais biofisiológicos em bibliotecas de domínio público* (Chart and graphic tool to public domain bio-physiologic signals libraries)," ULHT, July 2010;

7 Francisco Cabrita, Luís Monteiro, Computer Science Engineering BSc students, "FreeBSD Virtual Private Server Management Solution," ULHT, July 2010;

6 Flávio Leandro, Computer Science Engineering BSc student, "*Criação de um guião de formação e desenvolvimento de uma acção de formação na instalação e configuração da ferramenta NAGIOS* (Creation of a training script and a training course on the installation and configuration of NAGIOS)," ULHT, July 2010;

5 Francisco Santos, Maria Suzeth Barreto, Management Informatics BSc students, "*Criação de um portal de rádio* online (Development of an on-line radio web portal)," ULHT, July 2009;

4 Bruce Ferreira, Management Informatics BSc student, "*Implementação / Optimização de uma plataforma CRM* (SIEBEL) (Implementation and optimizador of a CRM platform (SIEBEL))," ULHT, July 2009;

3 Nilson Vieira, Francisco Ventura, Computer Science Engineering BSc students, "*Aplicação Cooperativa Angolana para o Desenvolvimento* (Application for the Angolan Development Cooperative)," BSc degree in Computer Science Engineering, ULHT, July 2009;

2 Arley Leal Silveira, Computer Science Engineering BSc student, "*Desenvolvimento de uma aplicação para extração de meta-dados da estrutura de DNS* (Development of a meta-data extraction tool for the DNS structure)," ULHT, July 2009;

1 Marco Moniz, Computer Science Engineering BSc student, "*Aplicação de Gestão Documental* (Application for document management)," ULHT, July 2008.

At the Polytechnic Institute of Viseu, he is supervisor for the following students of the FCT funded Summer School "*Aplicações IoT para a área da Saúde*" (July 2020 Nuno Pombo, Miguel Rodrigues, Zdenka Babic, Magdalena Punceva and Nuno Garcia Computerised Sentiment Analysis on Social Networks. Two case studies: FIFA World Cup 2018 and Cristiano Ronaldo joining Juventus– October 2020):

7 Artur Antunes Ricardo;

6 Eduardo Moisés da Silva Oliveira Martins;

5 Hugo Alexandre Ferreira Carvalho;

4 Liliana Raquel Santos Almeida;

3 Maria Eduarda Aragão de Moura;

2 Pedro Miguel Pereira Melo;

1 Ticiana Carneiro Lopes Capris.

At UBI, he was supervisor of the following TSI BSc students in curricular internship:

11 João Balina, curricular internship at Medocuf, Fundão, Portugal, February 2017-June 2017;

10 Guillaume Aguiar Coelho, curricular internship at Accounting2You, Covilhã, Portugal, February 2016-June 2016;

9 João Paulo Almeida Silva, curricular internship at ALLab, Covilhã, Portugal, February 2016-June 2016;

8 João Luís Fernandes Caseiro, curricular internship at ASSEC SIM Lda., Covilhã, Portugal, February 2016-June 2016;

7 André Filipe Martins de Matos Santos, curricular internship at Eyesee Solutions Lda., Lisbon, Portugal, February 2015-June 2015;

6 Cristiano Sebolão, curricular internship at Yazaki Saltano SA, Aveiro, Portugal, February 2015-June 2015;

5 Catarina Alexandra Carrazedo Lourenço, curricular internship at PC Medic, Fundão, Portugal, February 2014-June 2014;

4 Carlos Daniel Pereira Tavares, curricular internship at IS2You Lda, Fundão, Portugal, February 2014-June 2014;

3 João Paulo Lopes Gomes, curricular intership at ASSEC SIM Lda., Covilhã, Portugal, February 2014-June 2014;

2 Cátia Sousa Lopes curricular intership at ASSEC SIM Lda., Covilhã, Portugal, February 2014-June 2014;

1 Pedro Nuno Lopes Arcão, curricular internship at Centro Tecnológico em Educação, Covilhã, Portugal, February 2013-June 2013.

ANNEX F - Detailed scientific supervisory of scholarships

He is or was scientific supervisor for the following grantees:

37 PhD Scholarship (BD), funded by P2020 Horus 360º project, grant recipient Rui Carrilho, from September 2022 to 30 June 2023;

36 Post-Doctoral Scholarship, funded by UBI through the Cloud Computing Competence Centre (C4), awarded to Dr. Mehran Purvahab, from 1 February 2022 to 31 August 2022;

35 Research Scholarship (BI), funded by P2020 Nomavoy project, grant recipient (undisclosed), from 1 April 2021 2018 to 30 June 2023;

34 Post-Doctoral Scholarship, funded by UBI, grant recipient Dr. Vitor Costa, from 2 January 2019 to 2 April 2019:

33 Post-Doctoral Scholarship, funded by UBI through the Cloud Computing Competence Centre (C4), awarded to Dr. Sandeep, from 2 April 2019 to 2 April 2021;

32 Post-Doctoral Scholarship, funded by UBI through the Cloud Computing Competence Centre (C4), awarded to Dr. Ivan Miguel Serrano Pires, from 1 February 2019 to 31 January 2021;

31 Research Scholarship (BI), funded by UBI, grant recipient João Nuno Gabriel Isento, from 1 February 2018 to 1 August 2018;

30 Research Scholarship (BI), funded by UBI, grant recipient Dmytro Vasyanovych, from 1 October 2016 to 30 September 2017;

29 Research Scholarship (BI), funded by UBI, grant recipient Virginie Felizardo, from 1 October 2016 to 30 September 2017;

28 Research Scholarship (BI), funded by Eyesee Lda, grant recipient Valdir Ramgi, from 15 February 2015 to 14 February 2016;

27 Research Scholarship (BI), funded by FAVVUS IT-HR SA, grant recipient Dmytro Vasyanovych, from 1 February 2015 to 31 January 2016;

26 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Celina Alexandre, from 1 September 2014 to 31 December 2014;

25 Research Scholarship (BI), funded by FAVVUS IT-HR SA, grant recipient Quoc Trong Nguyen, from 1 September 2014 to 31 August 2015;

24 Scientific Initiation Scholarship (BIC) funded by TICE.Healthy, grant recipient João Silva, from 16 July 2014 to 31 December 2014;

23 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Nuno Ricardo Cruz Garcia, from 16 July 2014 to 31 August 2014;

22 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Paula Sousa, from 16 July 2014 to 31 December 2014;

21 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Virginie Felizardo, from 16 July 2014 to 31 December 2014;

20 Scientific Initiation Scholarship (BIC), funded by True-Kare Lda, grant recipient Cristiano Ramos, from 1 Abril 2014 to 30 September 2014;

19 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Daniel Oliveira, from 1 January 2014 to 31 December 2014;

18 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Nuno Cruz Garcia, from 1 January 2014 to 31 December 2014;

17 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Paula Sousa, from 1 January 2014 to 31 December 2014;

16 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Virginie Felizardo, from 1 January 2014 to 31 December 2014;

15 Scientific Initiation Scholarship (BIC), funded by projecto EyeSeeLab, grant recipient Miguel Antunes, between 17 December 2013 to 16 June 2014;

14 Scientific Initiation Scholarship (BIC), funded by projecto EyeSeeLab, grant recipient Tiago Ferreira, from 2 October 2013 to 1 April 2014;

13 Scientific Initiation Scholarship (BIC), funded by projecto EyeSeeLab, grant recipient Luís Marques, from 2 October 2013 to 1 April 2014;

12 Scientific Initiation Scholarship (BIC), funded by projecto EyeSeeLab, grant recipient Edgar Oliveira, from 2 September 2013 to 4 November 2013;

11 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Daniel Oliveira, from 16 July 2013 to 31 December 2013;

10 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Paula Sousa, from 16 July 2013 to 31 December 2013;

9 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Virginie Felizardo, from 16 July 2013 to 31 December 2013;

8 Scientific Initiation Scholarship (BIC), funded by projecto EyeSeeLab, grant recipient Miguel Antunes, from 17 June 2013 to 16 December 2013;

7 Research Scholarship (BI), funded by projecto EyeSeeLab, grant recipient Filipe Quinaz, from 2 April 2013 to 20 September 2013;

6 Scientific Initiation Scholarship (BIC), funded by projecto EyeSeeLab, grant recipient Luís Marques, from 2 April 2013 to 1 October 2013;

5 Scientific Initiation Scholarship (BIC), funded by projecto EyeSeeLab, grant recipient Tiago Ferreira from 2 April 2013 to 1 October 2013;

4 Scientific Initiation Scholarship (BIC), funded by TICE.Healthy, grant recipient Daniel Oliveira, from 16 July 2012 to 15 July 2013;

3 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Paula Sousa, from 16 July 2012 to 15 July 2013;

2 Scientific Initiation Scholarship (BIC), funded by TICE.Healthy, grant recipient Rafael Couto, from July 2012 to July 2013;

1 Research Scholarship (BI), funded by TICE.Healthy, grant recipient Virginie Felizardo, from 16 July 2012 to 1 July 2013.

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ANNEX G - Detailed participation in juries for PhD, MSc and BSc exams

He was member of the PhD Accreditation jury for Mehran Pourvahab, UBI, February 2022.

He is or was member of the academic jury for the following PhD students:

9 Leonice Maria Reis Souza Pereira, PhD in Computer Science and Engineering, UBI, thesis title "A process model for quality in use evaluation on clinical decision support systems", jury member. UBI, 12 July 2022;

8 Konstantia Barmpatsalou, PhD in Science and Information Technologies, thesis title "*Uma integração de métodos de Aquisição Forense em tempo real nos sistemas PPDR da próxima geração*", jury member. University of Coimbra, 11 May 2021;

7 David José da Silva Aresta Belo, PhD in Biomedical Engineering, *Universidade Nova de Lisboa,* thesis title "Learning Biosignals with Deep Learning", jury member. *Universidade Nova de Lisboa,* 17 February 2021;

6 Gonçalo Miguel Santos Marques, PhD in Computer Science and Engineering, UBI, thesis title "Internet of Things Architectures for Enhanced Living Environments," jury member. UBI, 22 April 2020;

5 Ivan Miguel Serrano Pires, PhD in Computer Science and Engineering (European PhD degree), UBI, thesis title "Multi-sensor Data Fusion in Mobile Devices for the Identification of Activities of Daily Living," jury member. UBI, 16 November 2018;

4 Eftim Zdravevski, PhD thesis in Computer Science Engineering, with the title "Parallelization of algorithms for data processing and classification," jury member, Ss. Cyril and Methodius University, Skopje, Republic of North Macedonia, June 2017;

3 Laura Montanini, PhD thesis in Information Engineering, with the title "Smartphone Applications for AAL and Well-being in the Home Environment," jury member, *Università Politecnica delle Marche*, Ancona, Italy, December 2016;

2 Jing Guo, PhD thesis on Sciences and Technologies of Information and Communication, with the title "*Serious Games pour la e-Santé: application à la formation des médecins généralistes* (Serious Games for e-Health: application to the training of general medical practitioners)," jury member, *Université Toulouse 3 Paul Sabatier*, Castres, France, June 2016;

1 Daniel Luís Silveira Robalo, PhD thesis on Computer and Electrotechnical Engineering, with the title "Planning and Dynamic Spectrum Management in Heterogeneous Mobile Networks with QoE Optimization," jury member, UBI, December 2014.

He was member of the academic jury for the Thesis Proposal Defence for the following student:

1 Hector Orillo, PhD thesis on Informatics Engineering, New Media and Ubiquitous Systems, with the title "*Sistema de perceção baseada em cooperação de veículos autónomos*," jury member, ULHT, October 2019.

He was member of the academic jury for the following MSc students:

44 João Pedro Lopes Ribeiro, MSc dissertation in Electromechanical Engineering, with the title "*Simulação Computacional de um Rover Robótico Agrícola para Pulverização Controlada de Infestantes e Recolha de Frutos Caídos*", UBI, February 2022

43 Leonel dos Santos Correia , MSc dissertation in *Mestrado em Desenvolvimento de Software e Sistemas Interativos*, with the title "*Monitorização de Sistemas em Larga Escala com* RASPBERRY PI", IPCB, March 2022;

42 Daniel Barata Pereira, MSc internship report in Computer Science and Engineering, with the title "*Construção de um Chat-Bot de suporte a actividades empresariais* (Development of a Chat Bot to support company activities)," UBI, 19 February 2021;

41 Igor Matias, MSc dissertation in Computer Science and Engineering, with the title "ECG based Prediction Model for Cardiac-Related Diseases using Machine Learning Techniques," UBI, June 2020;

40 Yoann Resende, MSc dissertation in Computer Science and Engineering, UBI, with the title "Road Event Mapping Method for Mobile Devices with Cloud Computing based Technologies," UBI, June 2020;

39 Leonor Cristina Pinheiro dos Santos Varandas, MSc dissertation in Electrotecnic and Computer Engineering, with the title "*Sistema de Monitorização Remota de Parâmetros Internos e da Envolvente de Árvores* (Remote monitoring system of internal and surrounding parameters for trees)," main jury, UBI, May 2020;

38 João Paulo Gonçalves da Silva Curto, MSc dissertation in Electromechanical Engineering, with the title "Safety and quality based traceability system for food supply chains," main jury, UBI, January 2020;

37 Paulino Joaquim Ferreira dos Santos, MSc dissertation in Computer Science Engineering and Information Systems, with the title "*Estabelecer o retrato virtual da implementação de políticas de gestão na eventualidade de uma indisponibilidade* (Establishing the virtual portrait of the implementation of management policies for the event of the unavailability of the system)," main jury, ULHT, October 2019;

36 Susana Cristina Gomes Marques, MSc dissertation in Fashion Design, with the title "The application of new technologies in fashion and implementation of additive manufacturing in the apparel industry," main jury, UBI, July 2019;

35 Richard Guise, MSc student in Computer Science and Engineering, dissertation title "Alarm and monitoring platform for UBI's computer network," UBI, September 2019;

34 Eduardo Filipe Ramos Felix, MSc dissertation in Electrical and Computer Engineering, with the title "Dynamic Analysis of Swimmers During Training, An Inertial Measurement Unit (IMU) Approach," main jury, Instituto Superior Técnico, Universidade de Lisboa, December 2018;

33 Euclides Hamilton Miúdo Gaspar, MSc student in Computer Science and Engineering, dissertation title "*Investigação, desenho e implementação de soluções de comunicação de Voz sobre IP* (Research, Design and implementation of communications solutions using Voice over IP)," UBI, September 2018;

32 João António dos Santos Mota, MSc student in Computer Science and Engineering, dissertation title "*Investigação e desenho de uma solução empresarial de web-hosting para Angola* (Research and Design of a Web-hosting entreprise solution for Angola)," UBI, September 2018;

31 Jusualdo Ferreira, MSc student in Computer Science and Engineering, dissertation title "*Investigação e Desenho de uma rede Pan-Académica para Angola* (Research and Design of a Pan-Academic Network for Angola)," co-advised by dr. Esmeralda Pires (FCCN), Dr. Rossitza Goleva (New Bulgarian University, Sofia, Bulgaria), UBI, September 2018;

30 Joana Filipa de Sousa Monteiro, MSc dissertation in Medicine, with the title "*Potencialidades das Aplicações Móveis no Controlo de Peso* (Potential of mobile applications in weight control)," main jury, UBI, March 2018;

29 João Pedro Cravosa Rainho, MSc dissertation in Software Development and Interactive Systems, with the title "*Aplicação Analítica Móvel para suporte ao Turismo, Economia e Mobilidade Urbana* (Mobile analytical tool to support tourism, economy and urban mobility)," main jury, IPCB, December 2017;

28 João Mário Carvalho de Oliveira Marques, MSc dissertation in Medicine, with the title "*Agenda para a Saúde – mOrganizer Aplicação móvel Android para uso em Medicina* (Health agenda – mOrganizer Android mobile application for use in Medicine)," main jury, UBI, June 2017;

27 Catarina Lopes Vicente, MSc dissertation in Fashion Design with the title "*O design de calçado e a impressão 3D* (Shoe design and 3D printing)," jury, UBI, June 2016;

26 Patrícia Vasconcelos Costa, MSc dissertation in Medicine, with the title "*Medicina na palma da mão, Consequencias da introdução da informática nas ciências médicas* (Medicine on the palm of the hand, consequences of the introduction of computer science in the medical sciences)," main jury, UBI, June 2016;

25 Filipe Miguel Carrão Gonçalves, MSc dissertation in Computer Science and Engineering, with the title "Core Solutions Transformation," jury member, UBI, October 2015;

24 Pedro Nuno Pinto, MSc dissertation in Electrotechnical and Computer Engineering, with the title "*Dispositivo de monitorização de segurança alimentar* (Device to monitor food safety)," main jury, UBI, November 2015;

23 Luís Manuel Pinto da Costa, MSc dissertation in Software Development and Interactive Systems, with the title "*Estrada Segura AAF Aplicação Android e Alertas no Facebook* (Safe Road AAD Android Application and Facebook Alerts)," main jury, IPCB, July 2015;

22 Márcia Macedo Bernardino, MSc dissertation in Mobile Computing, with the title "*Sistema de Detecção de Cansaço para Condutores* (System to detect tiredness in drivers)," main jury, IPG, May 2015;

21 Francisco José Fialho Nunes, MSc dissertation on Informatic and Engineering Technologies, with the title "*Criptosistema para sistema de ficheiros de grids de armazenamento* (Cryptosystem for a storing grid file system)," main jury, UAL, July 2014;

20 Clara Eloise Fernandes, MSc dissertation in Fashion Design, with the title "*Interação e tecnologia ao serviço da moda: a interacção com o interface virtual Kinect* (Interaction and technology at the service of fashion: The Virtual Interface Kinect Interaction)," main jury, UBI, October 2013;

19 João José Teles Gouveia, MSc dissertation in Computer Science and Engineering, with the title "*Mecanismos de autenticação em serviços baseados em Cloud* (Authentication mechanisms for cloud based services)," president of the jury, UBI, October 2013;

18 Micael João da Silva Santos, MSc dissertation in Computer Science and Engineering, with the title "*Uso da Entropia de Shannon para classificação de zonas artificiais ou naturais em imagens* (Use of Shannon's entropy for classification of artificial or natural areas in images)," jury member, UBI, October 2013

17 Ana Isabel Ruim Ramos, MSc dissertation in Mobile Computing, with the title "*SolGlobal - gestão de organizações sem fins lucrativos com Salesforce* (SolGlobal-management of not-for-profit organizations with Salesforce)," main jury, IPG, October 2013;

16 Cristina da Conceição Pinheiro, MSc dissertation in Mobile Computation, with the title "*Sistema de gestão de allotments em unidades hoteleiras* (Hotel unit allotment management system)," main jury, IPG, March 2013;

15 Nuno Miguel Cerqueira da Costa, MSc dissertation in Biomedical Engineering, with the title "User friendly knowledge acquisition system for medical devices actuation," main jury, Universidade Nova de Lisboa, Lisbon, November 2012;

14 Isabel Patrícia Pinheiro Peixoto Xavier, MSc dissertation in Electrotechnical and Computer Engeneering, Bionic Systems course, with the title "*Estudo da reacção humana aos odores através da análise dos sinais da electroencefalografia* (Study of human reaction to odors through the analysis of electroencefalography signals)," main jury, UBI, October 2012;

13 Daniel André Gonçalves Torres, MSc dissertation in Medicine, with the title "Feasibility of near infrared spectroscopy in stroke patients," main jury, UBI, July 2012;

12 Maria João Moreno Semedo, MSc dissertation in Computer Science Engineering and Information Systems, with the title "*Ganhos de produtividade e sucesso de metodologias ágeis vs metodologias em cascata no desenvolvimento de projectos de software* (Productivity gains and success of the agile

methodologies vs. cascade methodologies in the development of software projects),” president of the jury, ULHT, July 2012;

11 Amilcar Tiago Moniz Faria, MSc dissertation in Electrotechnical and Computer Engeneering, Bionic Systems course, with the title “*Desenvolvimento de um sistema pericial de apoio ao diagnóstico clínico do carcinoma da próstata* (Development of an expert system to support the clinical diagnosis of the prostate cancer),” main jury, UBI, July 2012;

10 Filipe Costeira Varela, MSc dissertation in Computer Science Engineering and Information Systems, with the title “*Desenho de superficies planetárias em 3D* (Design of planetary 3D surfaces),” main jury, ULHT, March 2012;

9 Paula de Jesus Salvador Agostinho, MSc dissertation in Software Engineering and Information Systems, with the title "Business Process Management para uma organização mais ágil (Business Process Management for a more agile organization),” president of the jury, ULHT, November 2011;

8 Joana Margarida Ribeiro Paulo, MSc dissertation in Electrotechnical and Computer Engineering, with the title “*Avaliação e aperfeiçoamento das especificações técnicas em dispositivos de lipoaspiração não-invasiva por ultra-sons* (Evaluation and refinement of the technical specifications in non-invasive ultra-sound liposuction equipments),” main jury, UBI, November 2011;

7 Luís Miguel Freire Machado Borges, MSc dissertation in Software Engineering and Information Systems, with the title "*Gestão e trabalhadores do conhecimento em tecnologias da informação (UML)* (Management and knowledge workers in Information Technology (UML)),” president of the jury, ULHT, October 2011;

6 Ricardo Ferreira, MSc dissertation in Software Engineering and Information Systems, with the title "Tests and software quality, best-tests applied to the software development industry,” jury member, ULHT, May 2011;

5 António José Brito Ferrão, MSc dissertation in Software Engineering and Information Systems, with the title “*Recrutamento e Selecção: uma solução tecnologicamente integrada* (Recruitment and Selection: a technologically integrated solution),” main jury, ULHT, January 2011;

4 Luís Miguel Gamanho Cardoso, MSc dissertation in Electrotechnical and Computer Engineering, with the title "*Adaptação do Robosapien V2 para o MSP430* (Adaptation of the Robosapien V2 for the MSP430),” jury member, UBI, November 2010;

3 Tiago Carvalho Moreira, MSc dissertation in Electrotechnical and Computer Engineering with the title "*Programação e Implementação de um Sistema Facial Robótico* (Programming and implementation of a robotic facial system),” main jury, UBI, November 2010;

2 Paula Sousa, MSc dissertation in Biomedical Sciences with the title "Assessment of the state of health by the measurement of a set biophysiological signals,” jury member, UBI, November 2010;

1 Virginie Felizardo, MSc dissertation in Electrotechnical and Computer Engineering with the title "Aquisition of physiological parameters to assess the caloric expenditure using an accelerometer,” jury member, UBI, November 2010.

In June 2021 he was the main jury for the defence of the Seminar curricular unit of the following students of the BioEngineering BSc course:

3 Júlia da Silva Ramos, Forecasting Models for SARS-CoV-2 Disease (COVID-19): A Systematic Literature Review;

In June 2018 he was the main jury for the defence of the Seminar curricular unit of the following students of the BioEngineering BSc course:

2 Rui Pedro Fradique Ferreira, *Monitorização e Controlo Agrícola*;

1 Mário Fonseca, *Sistemas de conservação e de transporte de órgãos para transplante*.

He was member of the following Juries for BSc Project curricular unit for the following students (when in Portuguese, the project names appear in its original title, not translated):

35 Henrique Pereira, "CityPass: *Um passe virtual para explorar Cidades*", main opponent, September 2020;

34 Guilherme António Carrilho Catalão, "Salesforce Development Engine – *Módulo 2*", main opponent, July 2020;

33 Flávio Miguel Pires Maximino, "*Caíste! Podes levantar-te?*", main oponente, July 2020.

In June-July 2015, he was President of the Jury for thirty-two projects at UBI. Names of students and of project names (original, not translated) are as follows:

32 Alexandre João Alves de Castro, "*Aplicação Android para Recolha e Transmissão de Dados de Fisiológicos de Equipamento com* Near Field Communication";

31 André Filipe da Silva Amaral, "*Banco de exercícios em MongoDB*";

30 André Filipe Ramalhinho Mendes, "*Página Web da Beira Serra*";

29 António Pedro da Costa Lousado Pinto Lourenço, "*Avaliação de variáveis para previsão de séries temporais através de técnicas de Data Mining*";

28 António Pedro Rodrigues Gaspar, "*Aplicação Móvel para Monitorização das Atividades de um Utilizador em Dispositivos Móveis de Empresas*";

27 Antonio Samuel Coutada da Cunha, "A Mobile Health Application using Low Cost Sensors";

26 Bruno Miguel Quintino Nunes, "*Interface para Visualização em PLN*";

25 Cátia Marina Rodrigues Cruz, "Graphical Application for Coding Football Moves";

24 César André Gaspar Lopes, "*Software baseado em localização*: *Comparação de APIs e desenvolvimento de caso de estudo*";

23 David Manuel Fernandes Mota, "*Aplicação de Radar de Tecnologia*";

22 Eunice Raquel Domingues Martins, "Prove this paper!";

21 Hugo Miguel Marçal Paulino, "*Estratégias de Prova de Teoremas Grátis*";

20 Inês Gonçalves Fatelo Lopes, "*Rotas do têxtil*";

19 João Eduardo Casaca Campos, "MOKids - Math Operations for Kids";

18 João Nuno Martins Ramos, "*Auto-Semelhança na Caracterização Textual*";

17 João Santos Reis, "Format Preserving Encryption and Java Language Based Security";

16 José Eduardo Sanches Mateus Lourenco, "*Otimização de operadores de tone mapping*";

15 Kelly Amaral, "*Sistema de Monitorização da Retinopatia Diabética*";

14 Luís Miguel Marques Correia, "*Simulador da pressão arterial*";

13 Luís Nuno Pimentel de Lima Garcia, "*Construção de plataforma web para estação de medição de aerossóis atmosféricos*";

12 Luís Pedro Arrojado da Horta, "Homomorphic Encryption and Java Language Based Security";

11 Marina Veiga Barbosa, "*Desenvolvimento de Plataforma para Software como Serviço*";

10 Miguel Gaudencio Miguens, "A Mobile Health Application for Real-time Patients Monitoring using Body Sensor Networks";

9 Pedro Miguel Freitas Moura, "A Mobile Health Application for Diagnosis and Actuation Support on Oncology";

8 Pedro Nuno Silva Campos, "*O Cartão de Cidadão no Alfresco*";

7 Renato Gabriel Mota dos Santos, "GiRAR-Guide of the Research in Augmented Reality";

6 Renato Gonçalo Sanlez Lopes, "My Own Safe Remote Storage Device";

5 Romeu Xavier Fontinha da Conceição, "Casual Game for Android";

4 Rui David Teixeira Paiva, "*Transmissão e Armazenamento Seguro de Mensagens e Ficheiros em Sistemas Android Baseado em Classes de Segurança*";

3 Telmo Daniel Martins Reinas, "*Sistema OSINT de Monitorização e Alarmística*";

2 Tiago José Lousa Antunes, "Construction of a Real Wireless Sensor Network Testbed for Environment Monitoring";

1 Tiago Póvoas Pereira, "Pipelining Army (ARM-in-WHY)".

Other participations in juries as regular member, as follows:

15 Luís Carlos Cavaca Pereira, BSc degree in Computer Science and Engineering, "*VipExpert – Pessoas influentes e especializadas, em redes sociais* (VipExpert, Influent and specialized persons in social networks," UBI, 2019;

14 Rui Pedro Pereira Teixeira, BSc degree in Computer Science and Engineering, "How to predict time to fix bugs?," UBI, 2019;

13 Daniel Afonso Valente, BSc degree in Computer Science and Engineering, "*Plataforma de gestão de formações do CFIUTE* (CFIUTE training management platform)," UBI, 2019;

12 Ana Rita Runa da Silva Reigones, BSc degree in Bioengineering, "*As tecnologias da informação e comunicação e electrónica (TICE) no sector agropecuário* (Information, communication and electronic technologies in the agriculture and cattle raising sector)," UBI, 2017;

11 João Carlos Gregório Gonçalves, BSc degree in Bioengineering, "*Classificação de faixas etárias através de um sinal de ECG* (Age classification through an ECG signal)," UBI, 2017;

10 Ana Silva, BSc degree in Computer Science and Engineering, "*Construção de uma App para a gestão de informação sobre aconselhamento nutricional no curso das ciências da nutrição* (Nutricional Science App for Information Management on Nutritional Counseling)," UBI, 2013;

9 André Vasco Esteves Galvinas, BSc degree in Computer Science and Engineering, "*Optimização por colónia de formigas aplicada ao problema da atribuição quadrática* (Ant Colony optimization applied to the quadratic assignment problem)," UBI, 2013;

8 Miguel Ramalheira Senos, BSc degree in Computer Science and Engineering, "HTML 5 & WEBGL," UBI, 2013;

7 Sérgio Santos, BSc degree in Computer Science and Engineering, "A mobile health application for fall detection and alerting system," UBI, 2013;

6 Leandro Zolini and João Ramalho, BSc degree in Computer Science Management, "*Modelação e desenvolvimento de um website para a empresa tempo-team* (Model and development of a website for the Tempo-team company)," ULHT, 2012;

5 Rafael Martins Cardoso, BSc degree in Computer Science and Engineering, with the project "Authentication on the operating system with quick response codes," UBI, 2012;

4 José Chantre, BSc degree on Computer Science and Engineering, with the project "*Identificação automática de variantes de Crioulo-Identifikason automátiku di variants di Kriolu* (Automatic identification of variants of Crioulo)," UBI, 2011;

3 Pedro Nuno da Rocha Fernandes, BSc degree on Technologies and Information Systems, Traineeship final report, UBI, 2011;

2 Henrique da Costa Mendes, BSc degree on Technologies and Information Systems, Traineeship final report, UBI, 2011;

1 Dominik Wegrzyn, BSc on Computer Science and Engineering, with the project "Implementation of a co-evolutionary genetic algorithm for an optimization model," UBI, 2011.

ANNEX H – Teaching Statement

Teaching Statement

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I am a true believer of the words of Ortega Y Gasset, here quoted freely: "I am myself and my circumstance". Therefore, I will start this Teaching Statement by sharing what has been some of my "circumstances", something that one does not find in a regular *Curriculum Vitae*.

In 1983 when I was admitted to college, being 17 years old, I fell in love with Computers. We had this amazing (and huge) IBM System 36, with four consoles, and an Intel 8088 based ENER 1000, a computer assembled by a Portuguese company in Coimbra and only a few of us, lucky ones, would be admitted into the terminal room and do some programming. I began teaching BASIC programming when I was 19 years old. Way back then, I realized that teaching was what I wanted to do. In fact, I spend a very significant part of my adult life teaching.

At those times the *Instituto Universitário da Beira Interior* where I was doing my preparatory course in Electrotechnical Engineering only enrolled students for the first two years of the course, the remaining three years of the 5-year BSc taken in either Lisbon (*Instituto Superior Técnico*), or Coimbra (*Universidade de Coimbra*) or Porto (*Universidade do Porto*). For several reasons, I dropped college and started teaching at the High-School I just had left a couple of years before. These were excellent times – I spend 7 years teaching there, and several of my former high-school students are now holding PhDs in areas related to Computing or Management.

Later in my life, at the *Universidade da Beira Interior*, I resumed studying when my oldest son entered elementary school. My wife and I (both had dropped college to work) concluded that having given up college was not such a good example to give to our son and daughter. And so, we both enrolled at the University of Beira Interior that year at the Mathematics / Informatics BSc course. While for her it was not that easy (she later decided that Informatics was not what she wanted to study, and she has since finished her degree in Social Sciences), for me these were 5 beautiful years, that I spend doing what I enjoyed the most: teaching and learning.

When you enjoy what you do, the chances to excel often increase, and this was what happened – in 2004 I was awarded as the best graduate student, and Prof. Mário Freire invited to pursue

my studies towards a PhD. I earned my PhD in November 2008, and in a blog I edit with some of my former students, I published a photo taken the day of my PhD exam, showing me side by side with my PhD jury, with the title "Dreams do not have an expiry date". Up to this day I still try to pass this message along.

Teaching Experience

My first job as a teacher was in 1987 at the *Escola Secundária Frei Heitor Pinto* (High School, Covilhã, Portugal). Over the following seven years, I taught students from 14 to 18 years old. I also taught a number of professional courses to older students, up to 70 years old, mostly in Professional Training Centres in Covilhã, Seia, Guarda and Castelo Branco. The old saying goes "When one teaches, two learn" for me is true each and every time.

Based on my teaching experiences (plural – underlining its diversity and heterogeneity), I have adopted the following principles / strategies:

1. Interact with each of the students in a direct manner, as to engage them first in the communication process with the teacher / professor, and later, as to engage them in their own learning process.

2. Define (and if necessary and adequate, negotiate) with the students the goals and the strategies for the course. This means defining upfront simple things as the expected outcome of the course for each student, the evaluation methodology and the weight of each of the evaluation tools in the global grading grid, the scheduling of the tests, assignments, and other evaluation tools, the grading policy, and define the set of values (honesty *vs*. plagiarism, communication, *etc*.) that shall rule the relations within the course.

3. Promote the right behaviors in class and around the course. I have found that these habits allow students to succeed best, both in academia and later as productive graduates. Therefore I encourage my students to:
    - see and understand different solutions and approaches than your own. Sharing experiences and contributing to the success of others is good, as long as others see it as good too and are able to correspond;
    - sometimes, the way to find a successful solution is through a mistake, so doing mistakes is not bad in itself, as long as it does not carry further bad consequences. In a learning environment, doing mistakes and taking (and evaluating) risks is an important part of the learning process; assess the risk, experiment and evaluate the results;
    - the learning process is a mix of four separate components: understand the base theory, know how to apply the theory to obtain results, know how to learn more about the theory and the results one has obtained, possibly in a self-learning mode, and finally, share

with others, teaching and accepting (constructive) criticisms, what one has learned and discovered new.

4. Promote an open and communicative environment while preserving mutual respect and acknowledging the hierarchy. The classroom / laboratory environment must be open enough to promote innovation and dialog, but also formal enough to promote the respect of the other – respect of the students, and of the Professors and Monitors. Promote this communication in class and out of class, using Internet tools that ask opinions to students, to share news that are relevant to their education.

5. Make learning and going to class an enjoying, challenging and intellectually demanding experience. If students enjoy themselves and learn, they will excel at it. But I always keep in mind that I'm only allowed to manage a fraction of the student's time – other classes and other commitments also demand the student attention and resources.

Course Development

Course development and organization is one of the most challenging aspects of the profession, mostly because this is a heuristic process that has to be adaptable and adapted to the profile of each class.

Theoretical and practical materials to support classes should be:

- based on good bibliography (previously defined);
- given in advance to students to allow them to prepare for classes;
- (for practical or laboratory task sheets) clear, stating exactly what is the problem and suggesting manners to solve it (sometimes using an algorithmic approach); these also contain different levels of difficulty and suggestions for out of class work;
- (for theoretical class support) intuitive, allowing the student to add personal notes on what is discussed in class; it will also include pointers to further extend the knowledge of the student in that particular subject.

Evaluation of practical or laboratory classes is often the result of a final practical assignment, encouraged to be approached as a teamwork, but making everyone aware that the assessment is individual. This poses some operational issues, mostly when there is the need to homogenize the evaluation criteria of different tutors. I have implemented a shared evaluation grids that include several parameters related to the assignment itself. Using a shared evaluation grid allows better coordination among tutors of a class. These evaluation parameters are in fact part of the assignment description, so the students know exactly where the evaluation will focus. The individual student evaluation, although very demanding for the evaluator, allows less ambiguity

and error in the process.

As a final remark for this Teaching Statement, I would like to point out that these strategies are not a finished product or a recipe for success, these are heuristics that I have found to work most of the times. Of course, having 30 students in a networks laboratory and being the only teacher in the laboratory is far more demanding than having 15 students, and therefore, I have also learned to adapt these strategies to challenging teaching environments, sometimes with higher success than others. But as a base rule, I believe that when I'm passionate about a subject, some of that passion passes over to the students, helping them to also enjoy learning that subject.

Covilhã, October 2019

ANNEX I – Research Statement

Research Statement

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In the early years of the 80's, being a programmer was mostly researching and discovering – the available resources were scarse and there were a lot of problems and questions to solve.

I have spent a very significant part of my life as a young adult, teaching. But when I was a teenager, 14 years old or so, when asked "what do you want to be when you grow up?" I would reply "I want to be a Scientist". As life was not easy for young Portuguese students in the post-April Revolution (post-1974), being a Scientist was perceived by everyone as a utopia, myself included, so I quickly ranked this perspective as yet another improbable outcome for my adult life.

In 1983 when I was admitted to college, I fell in love with Computers. We had this amazing (and huge) IBM System 36 with four terminals, and also an ENER 1000, a computer assembled in Coimbra, which run BASIC over CP/M, and only a few of us, lucky ones, would be admitted into the terminal room and do some programming.

I eventually dropped college, and at the age of 23 started my own company with the goal of developing software for the textile industry of the city. In 1999, when my oldest son, then 6 years old, started attending elementary school, my wife and I decided to re-enroll in the 5-year BSc course of Mathematics / Informatics. I was 33 years old then.

The thing was, I discovered later, when you enjoy what you do, the chances to excel are often increased, and this was what happened – in 2004 I was awarded as the best graduate student and invited to pursue my studies towards a PhD, which happened in November 2008, supported by funding from the Portuguese Foundation for Science and Technology and from Siemens S.A. through an Enterprise PhD Scholarship (*Bolsa de Doutoramento em Empresa*).

Research Background

I grew as a researcher in the Research Group of Siemens (Portugal), and later Nokia Siemens Networks (Portugal). I was member of the research team, and Team Leader for one of the three research teams. My PhD research occurred in enterprise environment from 2004 to 2008. My PhD research focused mostly on the architectural and algorithmic aspects of this new optical network model named Optical Burst Switching (OBS). At the time I began, there were a number of questions still unanswered, such as for example "what will be the expected size for a burst?" or "how can we control the network as to maximize throughput and minimize loss and delay?". This and other questions were discussed, and solutions / answers were proposed in my Thesis. Unfortunately, the industry never picked up the concept of Optical Burst Switching and the two or three companies that actually tried to sell OBS solutions eventually closed down.

After researching on Optical Networks, I spend some time as Head of Research of PLUX Lda., a new and promising Portuguese startup, mostly focusing on biosensors and biosignals, because while researching on network traffic in Optical Networks, we found that physiological signals such as the ones captured by ElectroCardiography, had some common statistical properties with network traffic data.

Returning to academia in 2010, I was challenged to create a new research area within the *Instituto de Telecomunicações* (IT) research institute. This new research group was related to Ambient Assisted Living, and this is how the Assisted Living Computing and Telecommunications Laboratory (ALLab) come to start, with a funding seed of 6000€ from IT.

I spend the following 8 years equipping, consolidating and developing this research structure, starting new research in this area, establishing research lines and cooperation with other colleagues at the different faculties at the *Universidade da Beira Interior*. In 2018 I invited Dr. Nuno Pombo to take over as coordinator of ALLab, position that he currently holds. We now are a group of 2 PhDs, 2 Post-Doc., 9 PhD students (some from foreign universities), 5 MSc students and 4 BSc students. We are in the process of hiring a third Post-Doc.

During this period of time we have seen several European projects approved. Probably the most relevant one was a COST Action, joining some 36 European and COST countries. I was elected Chair of the COST Action, IC1303 – AAPELE, Architectures, Algorithms and Platforms for Enhanced Living Environments, and although COST does not fund research, it allowed us to build and keep active a network of over 400 researchers and industry members all over Europe, Turkey and Israel.

The research I like to engage in is mostly focused on solving real life problems, presenting

solutions that can be deployed by companies, thus promoting the transference of technology and company-academia interaction. I also find that research results should be published preferably in an open access manner, particularly when this research was funded with public funds.

Current Research

My current research is focused on two areas, one is more specific and is related with the base research on Computer Networks, and the second one, related to Predictive Algorithms for Health and Well-being.

On Computer Networks, we have developed and are currently researching on a new almost-reliable protocol for data transmission with zero overhead. The initial results and reviews are very promising, and we look forward to applying this new protocol as base for Internet of Things solutions and for the new generation of real-time data transmission applications. There are two MSc dissertations currently being finished in this area.

From the COST IC 1303 network we have gathered a network of 120 scientists from Europe and other points of the globe around joint research on Predictive Algorithms for Healthcare and are editing a Special Section in IEEE Access magazine. We have a research project on this topic, affiliated to the new Cloud Computing Competence Centre (C4) at UBI, and around this concept, one Post-Doc., two PhD students, and two MSc students are currently developing research.

Research Agenda

I intend to pursue these lines of research, and to push forward the innovation that I think will fuel the development of the Industry in the next 10 years: light network protocols that are quite reliable and algorithms sustained by AI to predict outcomes and dangers in health related issues.

I have found that research teams that join BSc, MSc, PhD and Post-Docs. researchers are very efficient and therefore I try to align my MSc and BSc dissertation themes and final projects with parts of the main PhD research. I currently have four MSc dissertation proposals aligned with area of Predictive Algorithms for Healthcare, namely, proposals numbers NG01, NG03, NG05 and NG06 (please see list below). Other three MSc proposals (two reported in the list bellow and one in submission process) are aligned with a second research line hosted with C4, and with a research on the processing of biosignals. Many of these proposals are co-supervised by colleagues from the COST IC1303 network.

The list of MSc proposals for the 2019/2020 year is as follows (available at

https://www.di.ubi.pt/Cursos/mei/):

NG01: ECG based Prediction Model for Cardiac-Related Diseases using Machine Learning Techniques

NG02: Road Event Mapping Method for Mobile Devices with Cloud Computing based Technologies

NG03: Predictive algorithm for behavioural changes in diabetes self-management

NG04: Mobile Sensors Data Processing for the Identification of Road Events with Cloud Computing

NG05: Predictive Modelling for Atrial Fibrillation Episodes Detection with Cloud Computing

NG06: Real-time Features Detection for Cardiovascular diseases Prediction using ECG Signals.

The two C4 projects are focused on Predictive Algorithms for Healthcare and on Identification of Notable Events on vehicles.

There is also an approved H2020 project, termed PHArAON, focused on architectures and solutions for healthy and active ageing, with an overall budget of 21M€, from which one Post-Doc. and two PhD students will be funded. This project has started in December 2019.

In the next four years, research at ALLab will focus on Predictive Algorithms for Health, with funding from C4, COST Action CA16226 SHELD-ON and H2020 PHArAON.

For the next two years, research will also be focused on the identification of notable road events in vehicles, funded by C4 and by reserve funding from ALLab.

Additionally, research will be focused on two more issues, one spanning the work of the two MSc students on the almost-reliable Keyed-UDP protocol, with the prospect of an additional PhD thesis being created in this area, and the second one, on the measurement of biosignals for persons with neuro-degenerative diseases, an area where a MSc student is working on the application of entropy measurement algorithms for tremor movements.

Covilhã, June 2020