PEDRO MANUEL BRITO DA SILVA GIRÃO

CURRICULUM VITAE

December 2022

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1. IDENTIFICATION

Pedro Manuel Brito da Silva Girão, Portuguese, born in Lisbon, Portugal, on the 27th February, 1952.

2. ACADEMIC DEGREES AND TITLES

2.1. Faculty of Electrical Engineering, Technical University "Gheorghe Asachi", Iasi, Romania: Doctor Honoris Causa, April 2009.

2.2. Instituto Superior Técnico (IST): Agregação (Habilitation) in Electrical and Computer Engineering, December 1995.

2.3. IST: Ph.D. in Electrical and Computer Engineering, 1988: approved by unanimous decision with Distinction cum Laude.

2.4. IST: Licenciatura (5 years' degree) in Electrical Engineering, Telecommunications and Electronics, 1974/75, final classification 17/20 (top 2% of the class).

3. MILITARY SERVICE

Mandatory military service, from September 1977 to December 1978, in Army's Transmissions Branch.

4. TEACHING ACTIVITY

4.1 University

4.1.1 Professional Progression at IST

- Full Professor, since October 2007;
- Associate Professor, from May 1993 to October 2007;
- Assistant Professor, from May 1988 to May 1993;
- Assistant, from April 1975 to May 1988;
- Monitor, from December 1974 to March 1975.

4.1.2 Lectured Courses Licenciatura – 5 years' degree - in Electrical/Electrical and Computer Engineering, IST

- Sensors and Actuators, from 2002/03 to 2006/07;
- Instrumentation and Measurements, 3rd year, from 1991/92 to 2006/07;

- Electrical Measurements, 3rd year (2nd Semester) from 1985/86 to 1990/91;
- Electrical Measurements II, 4th year (2nd Semester), in 1976/77 and from 1978/79 to 1980/81;
- Electrical Measurements I, 4th year (1st Semester), in 1976/77 and from 1978/79 to 1980/81;
- Theoretical Electrotechnics II, 3rd year (1st Semester), in 1987/88 and 1988/89;
- Theoretical Electrotechnics I, 3rd year (1st Semester), in 1975/76, 1987/88 and 1988/89;
- Electronics II, 3rd year (2nd Semester), in 1974/75, 1975/76 and 1978/79;
- Electronics I, 3rd year (1st Semester), in 1974/75 and 1975/76.

4.1.3 Lectured Courses Licenciatura – 5 years' degree - in Aerospace Engineering, IST

Electronic Instrumentation, 5th year, in 1996/97.

4.1.4 Lectured Courses Licenciatura – 5 years' degree - in Biomedical Engineering, IST

Instrumentation and Signal Acquisition, 4th year, in 2004/05 and 2005/06.

4.1.5 Lectured Courses Licenciatura – 5 years' degree - in Naval Military Sciences, Naval Engineering, Naval School

Technology and Electrical Measurements, 3rd year (2nd Semester), from 1993/94 to 2014/15.

4.1.6 Lectured Courses BSc. in Electronics Engineering, IST

Introduction to Electronics Engineering, 1st year, 2018/19, 2019/20, 2020/21;

Soft Skills I, 2nd year, 2017/18;

Oral and Written Communication, 2nd year, 2013/14 and 2014/15.

4.1.7 Lectured Courses MSc. in Electrical/Electrical and Computer Engineering, IST

- Sensors and Actuators, from 2002/03 to 2005/06;
- PC-based Instrumentation, in 1990/91, 1991/92 and 1993/94;
- Automated Measuring Systems, in 1989/90;

- Measuring Transducers, in 1995/96, 1988/89, 1990/91 and 1996/97.

4.1.8 Lectured Courses MSc. in Electronics Engineering, IST

- MEE Soft Skills I, 1st year, 2018/19, 2019/20, 2020/21;
- Soft Skills II, 1st year, 2013/14, 2014/15 and 2017/18;
- Smart Sensors and Actuators, 1st year, 2006/07.

4.1.9 Lectured Courses Integrated MSc. – 5 years' degree - in Electrical and Computer Engineering, IST

- Instrumentation and Measurements, 3rd year, 2013/14 to 2020/21;
- Sensors and Actuators, 4th year, in 2006/07.

4.1.10 Lectured Courses BSc. program 6B07532 - "Standardization and Certification", L.N. Gumilyov Eurasian National University, Nur-Sultan, Kazakhstan

- Lean Production, 2020/21;
- Quality Control of Goods and Services, 2020/21.

4.1.11 Lectured Courses BSc. in Electrical and Computer Engineering, IST

- Instrumentation and Measurements, 2021/2022.

4.1.12 Teaching responsibilities

- Lean Production, 2020/21;
- Quality Control of Goods and Services, 2020/21;
- Introduction to Electronics Engineering, 2018/19, 2019/20, 2020/21, 2021/22;
- MEE Soft Skills I, 2018/19, 2019/20, 2020/21, 2021/22;
- Soft Skills I, 2017/18;
- Oral and Written Communication, 2013/14 and 2014/15;
- Soft Skills II, 2013/14, 2014/15 and 2017/18;
- Electrical Measurements I and II in 1979/80 and 1980/81;
- Electrical Measurements, from 1985/86 to 1990/91;
- Instrumentation and Measurements, in 1991/92, 1992/93, from 1997/98 to 2000/01 and in 2002/03;
- Electronic Instrumentation, in 1996/97 and 1997/98;
- Sensors and Actuators, from 2002/03 to 2005/2006;
- Smart Sensors and Actuators, in 2006/07;
- Technology and Electrical Measurements, since 1993/94;

- Electronics for Instrumentation, Licenciatura in Chemical Engineering - Processes and Industry and Applied Chemistry -;
- Instrumentation and Automated Measuring Systems, from 1988/89 to 1991/92;
- Measuring Systems, in 1992/93 and 1993/94.

In the M.Sc. Program in Electrical and Computer Engineering - Instrumentation and Electrical Measurements -, we proposed and were in charge of:

- Radiofrequency Measuring Systems, 1st Semester, in 2003/04.
- PC-based Instrumentation, 2nd Semester, from 1990/91 to 1995/96;
- Automated Measuring Systems, 2nd Semester, from 1987/88 to 1989/90;
- Instrumentation for Electrical Measurements, 1st Semester, from 1987/88 to 1990/91;
- Metrology, 1st Semester, from 1987/88 to 1990/91;

4.1.13 Final Year Projects Supervision

"Sistema Automático para Determinar a Característica Magnética e Medir Perdas em Materiais Ferromagnéticos Macios Utilizando o Aparelho de Epstein", LEEC, IST/UTL, 1993/94, Gilberto António Lopes;

"Implementação de um sistema automático de medida da condutividade de materiais semicondutores amorfos", LEEC, IST/UTL, 1993/94, J. A. Ferreira Lopes and J. O. Machado Vitorino;

"Extracção de formas de onda imersas em ruído", LEEC, IST/UTL, 1994/95, Federico Montesello, University of Padua, Italy;

“Determinação, em tempo real, do binário de uma máquina assíncrona pela medição digital dos valores instantâneos das tensões e correntes aos terminais", LEEC, IST/UTL, 1996/97, Adérito Machaieie, Fernando Mendes and Nuno Caldeira;

"Sistema de telemetria para meio atmosférico e meio aquoso", LEEC, IST/UTL, 1998/99, Rodrigo Parra and José Barreto.

4.1.14 Post-Graduation Supervision

Post-Doc

Octavian Adrian Postolache, June 2000 to May 2005, PRAXIS XXI post-doc grant;

Octavian Adrian Postolache, from February to September 1999.

Ph.D.

Paulo Miguel dos Santos Ferreira, Ph.D. in ECE, IST/UTL, "Voxel-based Dosimetry Using Multimodal Images for Patient-specific Liver Radioembolozation with Yttrium-90 Charged Glass Microspheres", concluded in April 2019;

Eduardo Correia Pinheiro, Ph.D. in ECE, IST/UTL, "Unobstructive Vital Signs Monitoring of Wheelchair Users", concluded in 2013;

Vítor Manuel Rodrigues Viegas, Ph.D. in ECE, IST/UTL, "Plataformas de Interoperabilidade para Sistemas de Instrumentação, Medida e Controlo", concluded in January 2012;

Ricardo Filipe de Queirós, Ph.D. in ECE, IST/UTL, "Medidas de Alta Resolução Utilizando Ultrasons", concluded in 2008;

José Luís Gonçalves Correia da Mata, Ph.D. in Physics Engineering, IST/UTL, "Modelos e Técnicas de Instrumentação para Medidas Simultâneas de Densidade e Viscosidade de Líquidos", concluded in 2004;

José Miguel Costa Dias Pereira, Ph.D. in ECE, IST/UTL, "Técnicas para Aumento de Desempenho em Sistemas de Digitalização de Sinais", concluded in December 1999;

Helena Maria dos Santos Geirinhas Ramos, Ph.D. in ECE, IST/UTL, "Modelização do Comportamento de Materiais Ferromagnéticos Macios Sujeitos a Campos Magnéticos de Direcção Variável", concluded in January 1995.

M.Sc.

Pedro Daniel Pinheiro da Silva, M.Sc. in ECE, IST/UL, "smartHealthCareMobunit - Unidade móvel baseada na utilização de plataformas "smart phone" para

monitorização e gestão de valores biomédicos e da qualidade do ar em ambientes inteligentes, to be concluded;

Teresa Afonso Vilar de Castro Paredes, M.Sc. in ECE, IST/UL, “Gait MR: Gait Rehabilitation Monitor and Cardiac Assessment”, concluded in November 2020;

Cláudia Alexandra de Sousa Furtado, M.Sc. in EE, IST/UL, “IIoT-based Inventory Management”, concluded in June 2019:

Francisco Cary, M.Sc. in ECE, IST/UL, EHR & Kinect for Physiotherapy, concluded in November 2014;

Mário Sérgio Barata Cunha Ribeiro, M.Sc. in ECE, IST/UL, “Monitoring with Application in Human Machine Interfacing”, concluded in May 2013;

João Miguel Correia Freire, M.Sc. in ECE, IST/UTL, “Smart Sensors for Ubiquitous Health Monitoring of Wheelchair Users”, concluded in December 2012;

João Oliveira do Rosário, M.Sc. in EE, IST/UTL, “Automation of a SMD Component Placement Machine”, concluded in November 2009;

Tiago Belo Antunes, M.Sc. in ECE, IST/UTL, “Utilização de Fibras Ópticas para Medida de Deformação em Estruturas”, concluded in May 2008;

Paulo Maia Santos, M.Sc. in ECE, IST/UTL, “Sistema Telemétrico para Monitorização da Qualidade da Água”, concluded in July 2000;

José Miguel Costa Dias Pereira, M.Sc. in ECE, IST/UTL, “Identificação de Componentes e Sistemas Passivos em Radiofrequência”, concluded in February 1995.

Internships

Octavian Adrian Postolache, PhD. preparation, from March to July 1997;

José Carlos Neves, Departamento de Engenharia Electrotécnica da Universidade Agostinho Neto, Luanda, Angola, 1990.

4.1.15 Course Evaluation

BSc in Electrical and Computer Engineering, Instituto Politécnico de Leiria, EUR-ACE (EURopean ACcredited Engineer) Label evaluation commission member, 2021;

MSc in Electrical Engineering, Instituto Politécnico de Leiria, EUR-ACE (EURopean ACcredited Engineer) Label evaluation commission member, 2021;

BSc in Electrical and Computer Engineering, Instituto Politécnico de Leiria, EUR-ACE (EURopean ACcredited Engineer) Label evaluation commission member, 2018;

MSc in Electrical Engineering, Instituto Politécnico de Leiria, EUR-ACE (EURopean ACcredited Engineer) Label evaluation commission member, 2018;

Integrated Master in Electrical and Computer Engineering, Universidade de Coimbra, EUR-ACE (EURopean ACcredited Engineer) Label evaluation commission member, 2017;

MSc in Electrical Engineering, Instituto Superior de Engenharia do Porto (ISEP), EUR-ACE (EURopean ACcredited Engineer) Label evaluation commission member, 2017;

Integrated Master in Electronics and Telecommunications Engineering, Universidade de Aveiro, EUR-ACE (EURopean ACcredited Engineer) Label, president of the evaluation commission, 2015;

BSc in Telecommunications and Informatics Engineering, ISCTE - Instituto Universitário de Lisboa (ISCTE-IUL), EUR-ACE (EURopean ACcredited Engineer) Label, president of the evaluation commission, 2014;

BSc in Electrical Engineering – Electrical Power Systems, Instituto Superior de Engenharia do Porto (ISEP), EUR-ACE (EURopean ACcredited Engineer) Label, president of the evaluation commission, 2014;

BSc in Electrical Engineering, Instituto Superior de Engenharia do Porto (ISEP),

EUR-ACE (EURopean ACcredited Engineer) Label, president of the evaluation commission, 2014;

MSc in Electrical Engineering – Electrical Power Systems, Instituto Superior de Engenharia do Porto (ISEP), EUR-ACE (EURopean ACcredited Engineer) Label, president of the evaluation commission, 2013;

MSc in Electrical Engineering, Instituto Superior de Engenharia do Porto (ISEP), EUR-ACE (EURopean ACcredited Engineer) Label, president of the evaluation commission, 2013;

Integrated Master in Physical Engineering, Universidade de Aveiro, EUR-ACE (EURopean ACcredited Engineer) Label, president of the evaluation commission, 2012;

MSc in Telecommunications and Informatics Engineering, ISCTE - Instituto Universitário de Lisboa (ISCTE-IUL), EUR-ACE (EURopean ACcredited Engineer) Label, president of the evaluation commission, 2012;

Integrated Master in Electrical and Computer Engineering, Faculdade de Engenharia da Universidade do Porto (FEUP), EUR-ACE (EURopean ACcredited Engineer) Label, president of the evaluation commission, 2012.

4.1.16 Juries of Academic and Research Degrees

Agregação (Aggregation/Habilitation)

Doctor Eng. João Carlos Amaro Ferreira, in Information Technology Sciences, ISCTE-IUL, 2019;

Doctor Eng. Paulo Fernando Pereira de Carvalho, in Computer Science and Engineering, FCTUC, 2018;

Doctor Eng. Octavian Adrian Postolache, in Electrical and Computer Engineering, IST/UL, 2016;

Doctor Eng. António Barbosa Lobo Ribeiro, in Physics, Faculdade de Ciências da

Universidade do Porto, 2013;

Doctor Eng. Henrique Manuel Gomes, in Electronic and Telecommunications Engineering, Universidade do Algarve, 2012;

Doctor Eng. Carlos Jorge Ferreira Silvestre, in Electrical and Computer Engineering, IST/UTL, 2011;

Doctor Eng. Pedro Miguel Pinto Ramos, in Electrical and Computer Engineering, IST/UTL, 2010;

Doctor Eng. Marcelino Bicho Santos, in Electrical and Computer Engineering, IST/UTL, 2010;

Doctor Eng. Jorge Manuel dos Santos Ribeiro Fernandes, in Electrical and Computer Engineering, IST/UTL, 2010;

Doctor Eng. Eduardo José Ramos Morgado, in Electrical and Computer Engineering, IST/UTL, 2009;

Doctor Eng. José Miguel Costa Dias Pereira, in Electrical and Computer Engineering, IST/UTL, 2008;

Doctor Eng. Silvestre Dias Antunes, in Mechanical Engineering, IST/UTL, 2004.

Habilitation (Habilitação)

Doctor Bruno Miguel Soares Gonçalves, Habilitation for Scientific Coordination (Provas de Habilitação para o exercício de Funções de Coordenação Científica), Instituto Superior Técnico/UTL, February 2012.

Coordinator Professor

Instrumentation and Measurement, Escola Superior de Tecnologia, Instituto Politécnico de Setúbal, July 2005;

Instrumentation and Measurement – Group of Processing and Signal Transmission, Escola Superior de Tecnologia do Instituto Politécnico de Setúbal, June 2000;

Electrical Engineering (Group of Electronics and Telecommunications), Instituto Superior de Engenharia do Instituto Politécnico do Porto, March, 1998.

Ph.D.

Diogo Miguel Bárbara Coroas Prista Caetano, Ph.D. in ECE, IST/UL, March 2021, "Circuits and Signal Processing for Magnetoresistive Sensor Arrays";

Nelson Filipe Pereira dos Santos, Ph.D. in ECE, IST/UL, September 2021, "Conversores Isolados para Redes Residenciais de Baixa Tensão em Corrente Continua";

João Filipe Dias Guerreiro, Ph.D. in ECE, IST/UL, June 2020, "DVFS Modeling for Energy-Efficient GPU Computing";

Luís Miguel Moreira Mendes, Ph.D. in ECE, IST/UL, February 2020, "Analysis, Modeling and Synthesis of CMOS Radio Frequency Discrete Tuning Varactors";

Mrinalinee Pandey, Ph.D. in ECE, IST/UL, February 2020, "Design of CMOS Active Inductors and its Applications";

António Manuel Lourenço Canelas, Ph.D. in ECE, IST/UL, September 2019, "Yield-aware Analogue IC Design and Optimization in Nanometer-scale Technologies";

Joshin Parakkulangarayil Krishnan, Ph.D. in ECE, IST/UL, February 2019, "Complex-Valued Image Restoration for Interferometric Phase Denoising and Phase Retrieval";

Alessandro Parrella, PhD in Information Technology and Electrical Engineering, Università degli Studi di Napoli Federico II, February 2019, "Magnetic Material Characterization and Magnet Axis Displacement Measurement for Particle Accelerators";

Diogo Rodrigues Oliveira de Brito, Ph.D. in ECE, IST/UL, December 2018, "Radio Pulsar System for Navigation";

Alberto López Martínez, Ph.D. in Electrical and Electronics Engineering, University of Oviedo, Spain, July 2018, “Estudio de la Señal Electrooculográfica y su Aplicación a Sistemas Médicos Asistenciales”;

João Paulo Narciso dos Reis, Ph.D. in ECE, IST/UL, July 2018, “Contributo para a Autoavaliação de Sensores Resistivos em Obras de Arte de Engenharia Civil”;

Tiago João Nunes Domingues, Ph.D. in ECE, IST/UL, January 2018, “Click Modulation”;

Bruno André Marçal Jacinto, Ph.D. in ECE, IST/UL, December 2017, “Digitally Controlled DC-DC Buck Converter for SoC”;

Giordana Severino, Ph.D. in Engineering, Department of Engineering, University of Sannio, Benevento, Italy, October 2017, “High precision PCB rotating coil for magnets’ magnetic measurements”. Thesis evaluation;

Domenico Caiazza, Ph.D. in Engineering, Department of Engineering, University of Sannio, Benevento, Italy, October 2017, “Metrological performance enhancement of wire methods for magnetic field measurements in particle accelerators”. Thesis evaluation;

Dário Jerónimo Loureiro Pasadas, Ph.D. in ECE, IST/UL, May 2017, “Characterization of Defects by Eddy Current Image Constructions”;

Paula Cristina Alves Pereira, Ph.D. in ECE, IST/UL, April 2017, “Multiple Phase Ring Oscillators”;

Tiago Jorge Rocha, Ph.D. in ECE, IST/UL, February 2017, “Velocity Induced Eddy Current Testing”;

Pedro Daniel Graça Casau, Ph.D. in ECE, IST/UL, November 2016, “Synergistic Hybrid Feedback Control with Applications to Autonomous Air Vehicles”;

Taimur Gibran Rabuske Kuntz, Ph.D. in ECE, IST/UL, June 2016, “Charge-Sharing SAR ADCs for Low-Voltage Low-Power Applications”;

José Carlos Sequeira Martins dos Santos, Ph.D. in ECE, IST/UL, June 2015, "Development and Implementation of an Impedance Measuring System Applied to Viscosity Sensors";

Tiago Manuel Oliveira Henriques Moita, Ph.D. in ECE, IST/UL, March 2015 "Characterization Test Preparation for Mixed-Signal Integrated Circuits";

Eduardo Correia Pinheiro, Ph.D. in ECE, IST/UL, December 2013, "Unobstructive Vital Signs Monitoring of Wheelchair Users";

Abdolkarim Pahliani, Ph.D. in ECE, IST/UTL, March 2012, "Active Cooperative Perception in Networked Robot Systems";

Vítor Manuel Rodrigues Viegas, Ph.D. in ECE, IST/UTL, January 2012, "Plataformas de Interoperabilidade para Sistemas de Instrumentação, Medida e Controlo";

José António Rodrigues Germano, Ph.D. in ECE, IST/UTL, October 2011, "A Hand-Held Microsystem for Biological Analysis";

José Ângelo Rebelo Sarmento, Ph.D. in ECE, IST/UTL, July 2011, "Optimized Digital Clock and Data Recovery Architectures";

Antonino Petrolino, Ph.D. in ECE, IST/UTL, July 2011, "Development of Efficient and Accurate SISO and MIMO Multipath Fading Channel Simulators";

Svetislav Momcilovic, Ph.D. in ECE, IST/UTL, June 2011, "Parallel Video Coding on Multi-Core Platforms";

Carlos Leong, Ph.D. in ECE, IST/UTL, June 2011, "Design of High-Performance and Testable Globally Asynchronous Locally Synchronous Systems for Medical Imaging Applications";

Rui Pedro Batoreo Amaral, Ph.D. in ECE, IST/UTL, April 2011, "Indexação de Programas Noticiosos";

Maria Isabel de Araújo Godinho, Ph.D. in Physics, Faculdade de Ciências,

Universidade de Lisboa, March 2011, “Implementação de um Sistema Experimental e Aplicação Metrológica para a Materialização do Ohm e Calibração de Resistências-Padrão”;

Catarina Isabel Carvalheiro Brites, Ph.D. in ECE, IST/UTL, March 2011, “Explorando a Modelação do Ruído de Correlação em Codificação de Vídeo Wyner-Ziv”;

Sónia Alexandra Ferreira de Magalhães Antunes Pelizzari, Ph.D. in ECE, IST/UTL, February 2011, “Oil Spill Detection Using SAR Images”;

Ana Paula Filipe Tomé, Ph.D. in Architecture, IST/UTL, October 2010, “Visão Computacional da Mobilidade em Espaços Informais de Aprendizagem para um Método de Análise Espaço-Uso. Um caso de Estudo”;

Indira Nolivos Alvarez, Free University of Brussels, October 2010, “A Bayesian Model to Construct a Knowledge Based Spatial Decision Support System for the Chaguana River Basin”;

Jorge Filipe Leal Costa Semião, Ph.D. in ECE, IST/UTL, July 2010, “Power-Supply and Temperature Based Methodologies to Improve Tolerance and Detection of Delay Faults in Synchronous Digital Circuits”;

Ricardo Filipe de Queirós, Ph.D. in ECE, IST/UTL, March 2008, “Medidas de Alta Resolução Utilizando Ultrasons”;

Álvaro Silva Ribeiro, Ph.D. in Physics, Faculdade de Ciências, Universidade de Lisboa, July 2006, “Avaliação de Incertezas de Medição em Sistemas Complexos Lineares e Não-lineares”;

José Luís Correia da Mata, Ph.D. in Physics, IST/UTL, July 2004, “Modelos e Técnicas de Instrumentação para Medidas Simultâneas de Densidade e Viscosidade de Líquidos”;

Maria da Conceição Falcão Líbano Monteiro da Costa Macedo, Ph.D. in ECE, IST/UTL, December 2003, “Dynamic Characterization of Analogue to Digital

Converters Exhibiting Input Slope Dependent Nonlinearities";

Manuel José Freire Fonseca da Silva, Ph.D. in ECE, IST/UTL, January 2003, "Sistema Automático de Medida de Impedâncias";

Francisco André Corrêa Alegria, IST, Ph.D. in ECE, IST/UTL, June 2002, "Caracterização Estática e Dinâmica de Conversores Analógico/Digitais pelo Método do Histograma";

Jorge Manuel dos Santos Ribeiro Fernandes, Ph.D. in ECE, IST/UTL, March 2000, "Conversores A/D com Arquitecturas do Tipo Paralelo";

José Miguel Costa Dias Pereira, Ph.D. in ECE, IST/UTL, December 1999, "Técnicas para Aumento do Desempenho em Sistemas de Digitalização de Sinais";

Bernardo Maria Pereira Barata Gorjão Henriques, Ph.D. in ECE, IST/UTL, October 1995, "Circuitos Integrados em Tecnologia CMOS Digital para Conversão de Sinal Digital-Analógico de Alta Velocidade";

Helena Maria dos Santos Geirinhas Ramos, Ph.D. in ECE, IST/UTL, January 1995, "Modelização do Comportamento de Materiais Ferromagnéticos Macios Sujeitos a Campos Magnéticos de Direcção Variável";

Artur Fernando Delgado Lopes Ribeiro, Ph.D. in ECE, IST/UTL, October 1990, "Gravação Magnética em Materiais de Partículas".

Equivalence to Ph.D.

Bo Feng, University of Lisbon, November 2018;

Octavian Adrian Postolache, Technical University of Lisbon, July 2008.

Researcher

Assistant Researcher, Rui Palha de Mello Freitas, INETI, March 2002.

M.Sc.

Cláudia Alexandra de Sousa Furtado, M.Sc. in Electronics Engineering, IST/UL,

June 2019, “IIoT-based Inventory Management”;

Tiago da Silva Barra, M.Sc. in Electronics Engineering, IST/UL, April 2019, “Planning, Development and Implementation of Monitoring System for Remotely Controlled Car”;

Bernardo Ribeiro de Matos, M.Sc. in Electronics Engineering, IST/UL, November 2018, “Develop, implement and characterize an electric energy monitoring device”;

André Gonçalves Torres, M.Sc. in Engineering Physics, IST/UL, November 2017, “Preliminary Design of the ITER Magnetic Diagnostic Integrators”;

João Miguel Correia Freire, M.Sc. in ECE, IST/UTL, December 2012, “Smart Sensors for Ubiquitous Health Monitoring of Wheelchair Users”;

Pedro Miguel Mouta Rodrigues, M.Sc. in ECE, IST/UTL, February 2008, “Satellite Attitude Determination with an Optical Position Sensing Detector”;

Miguel António Felizardo da Costa, M.Sc. in ECE, IST/UTL, February 2008, “New Instrumentation for Superheated Droplets Detectors”;

Luís Miguel da Silva Gurriana, M.Sc. in ECE, IST/UTL, October 2004, “Implementação e Caracterização Metrológica de um Sistema de Medida para Monitorização da Qualidade da Água”;

João Bernardo Pereira Correia, M.Sc. in ECE, IST/UTL, January 2004, “Calibração e Correcção da Sensibilidade Cruzada Utilizando o Modelo Adoptado pela Norma IEEE 1451.2”;

Vítor Manuel Rodrigues Viegas, M.Sc. in ECE, IST/UTL, June 2003, “Projecto e Implementação de um Sistema de Sensores Inteligentes Baseado na Norma IEEE 1451”;

Carlos Manuel Almeida Santos, M.Sc. in ECE, IST/UTL, October 2001, “Automatização dos Ensaios de Carga Vertical em Estacas de Fundações”;

Paulo Maia Santos, M.Sc. in ECE, IST/UTL, October 2000, “Sistema Telemétrico

para Monitorização da Qualidade da Água";

Francisco André Corrêa Alegria, M.Sc. in ECE, IST/UTL, October 1997, "Calibração Automática de Aparelhos de Medida";

André Gil Martin Cardoso, April 1996, Faculdade de Engenharia da Universidade do Porto, "Síntese, análise e realização de filtros passivos";

José Miguel Costa Dias Pereira, IST/UTL, February 1995, "Identificação de Componentes e Sistemas Passivos em Radiofrequência".

Project in Electronics Engineering

Joana de Gomes Alves, Project in Electronics Engineering, IST/UL, July 2020, "Desenvolvimento método Delphi numa plataforma de apoio à decisão – Demonstração com caso de avaliação da eficiência de unidades hospitalares";

Pedro Francisco Parracho dos Santos, Project in Electronics Engineering, IST/UL, July 2020, "Sistema automático de contabilização de automóveis para controlo de tráfego numa via pública";

Guilherme David Marques Trindade, Project in Electronics Engineering, IST/UL, July 2020, "An integrated space radiation-tolerant oscillator";

Pedro Martins Almeida Ribeiro de Oliveira, Project in Electronics Engineering, IST/UL, January 2020, "Dedicated VPN Implementation in Secure System";

Mário Diogo Patrício da Silva, Project in Electronics Engineering, IST/UL, January 2020, "High resolution magnetic scanner for cancer screening";

Diogo Fernandes de Castro Brandão de Almeida, Project in Electronics Engineering, IST/UL, January 2020, "Conductivity Sensor for Agricultural Substrates".

Pedagogical and Scientific Capabilities

Manuel José Freire Fonseca da Silva, IST, July 1996.

Final Year Projects

Pedro Pedroso, LEEC, IST/UTL, December 2007, "Módulo Educacional da Malha de Captura de Fase";

Rodrigo Parra and José Barreto, LEEC, IST/UTL, December 1998, "Sistema de telemetria para meio atmosférico e meio aquoso";

José Luís Crespo Simão Nunes and António Jorge de Sousa Narra, LEEC, IST/UTL, August 1998, "Optimização e Simulação de um Sistema de Transmissão Óptica TDM com Igualação Discreta";

André de Jesus and Pedro Ferreira, LEEC, IST/UTL, July 1998, "Comutação Fotónica de Solitões em Acopladores Não-Lineares de Fibras Ópticas";

Miguel Alexandre Cabral and Rui Filipe Efigénio Gomes, LEEC, IST/UTL, April 1998, "Tecnologias para Calibração de Conteúdo Visual MPEG-4";

Hélder Milheiros and Nuno Felizardo, LEEC, IST/UTL, December 1997, "Disrupção de Linhas Aéreas de Alta Tensão Face a Descargas Atmosféricas";

Paulo Manuel Martins dos Santos, LEEC, IST/UTL, October 1997, "Placa Multi-Função para PC";

Adérito Machaieie, Fernando Mendes and Nuno Caldeira, LEEC, IST/UTL, August 1997, "Determinação, em Tempo Real, do Binário de uma Máquina Assíncrona pela Medição Digital dos Valores Instantâneos das Tensões e Correntes aos Terminais";

Angela de Dominicis, Erasmus student, LEEC, IST/UTL, April 1997, "Ground Electrodes Behaviour for Lightning Currents ";

Nuno Daniel Mendonça Leitão and Pedro Escudeiro Morais, LEEC, IST/UTL, November 1996, "Defeitos Múltiplos em Linhas de Transmissão de Energia Originados por Descargas Atmosféricas ";

Ana Isabel Gonçalves Fernandes and Rui Manuel Boavida Martinho, LEEC,

IST/UTL, October 1996, "Automatização de um Analisador de Redes, de Espectros e Medida de Impedância";

João Saldanha Festas, LEEC, IST/UTL, September 1996, "Sobretensões em Linhas de Transmissão de Energia Causadas por Descargas Atmosféricas Indirectas";

Sérgio Rui Abrantes Simões, Erasmus student, LEEC, IST/UTL, September 1996, "Estudo do Comportamento das Linhas de Média Tensão Face a Descargas Atmosféricas";

Manuel Chen, Erasmus student, University of Erlangen, Nuremberg, Germany, IST, July 1996, "A graphical interface under windows for the test of ADCs using the VXI Standard";

Maria de Fátima Trindade Guerreiro, Adriano Miguel Pinto de Almeida Farinha Rodrigues and Pedro Miguel Pinto Ramos, LEEC, IST/UTL, November 1995;

Francisco André Corrêa Alegria, LEEC, IST/UTL, November 1995, "Placa Multifunção para PC";

J. A. Ferreira Lopes and J. O. Machado Vitorino, LEEC, IST/UTL, June 1995, “Implementação de um Sistema Automático de Medida da Condutividade de Materiais Semicondutores Amorfos”;

Gilberto António Lopes, LEEC, IST/UTL, February 1995, “Sistema Automático para Determinar a Característica Magnética e Medir Perdas em Materiais Ferromagnéticos Macios Utilizando o Aparelho de Epstein”;

Maria da Conceição Falcão Líbano Monteiro, LEEC, IST/UT, January 1995.

4.1.17 Juries for Academic Positions

Assistant Professor, Electronics, DEEC, IST, June 2022.

Associate Professor, Electronics, DEEC, IST, March 2021.

Assistant Professor, Electronics, DEEC, IST, March 2021.

Adjunct Professor, Engenharia Eletrotécnica Marítima, perfis Sistemas Digitais,

Microcontroladores e Computadores, Escola Superior Náutica Infante D. Henrique, January 2021.

Associate Professor, Electronics, DEEC, IST, July 2020.

Associate Professor, Electronics, DEEC, IST, July 2019.

Tenure Tack as Professor at National University of Technology, Islamabad, Pakistan, Dr Umair Manzoor, February 2019.

Associate Professor, Electronics, ISCTE-IUL, January 2019.

Associate Professor, Electronics, DEEC, IST, January 2017.

External expert in committees formed by Greek Universities for the evaluation of professors of different levels, since March 2014:

- University of the Aegean
- Technological Educational Institute of Athens
- Aristotle University of Thessaloniki
- Department of Electronic Engineering of Technological Education Institute of Athens
- Department of Informatics and Telecommunications of the University of Peloponnese
- Department of Natural Resources Management and Agricultural Engineering of the Agricultural University of Athens
- Department of Informatics and Telematics of the Harokopio University
- Department of Civil Engineering and Surveying Engineering and Geomatics of the Technological Educational Institute of Athens
- Department of Mathematics of the University of the Aegean
- Department of Electrical and Computer Engineering of the National Technical University of Athens
- Department of Cultural Technology and Communication of the University of the Aegean

- Department of Informatics and Telecommunications of the National and Kapodistrian University of Athens
- Department of Civil Engineering of University of West Attica
- Department of Physics of the University of Thessaly
- Department of Production Engineering and Management of the International Hellenic University
- Department of Informatics Engineering of Technological Educational Institute of Peloponnese

Assistant Professor, Electrical Engineering, University of Évora, February 2012.

Assistant Professor, Computers, DEEC, IST, July 2011.

Full Professor, Electronics, DEEC, IST, December 2010.

Associate Professor, Electronics, DEEC, IST, December 2010.

Full Professor, Electronics or Computer, DEEC, IST, December 2009.

Associate Professor, Electronics, DEEC, IST, December 2009.

4.1.18 Juries for Research Positions

C-0011-22: International Call for PhD Hiring, under the Scope of the Project Laboratório Associado LA/P/0109/2020, IT, July 2022.

4.1.19 Other Juries

Prémio Luís Vidigal, 2014

4.2 University Extension

4.2.1. Post-University

European Social Fund:

- Fundamentals of Laboratorial Instrumentation, action “Projecto Hidrometalúrgico”, in 1987;
- Instrumentation, action "Instalações e Sistemas de Energia Eléctrica", in 1986 and 1987.

4.2.2 Pre-University

European Social Fund:

- Instrumentation and Measuring Equipment, Metropolitano de Lisboa, 1996;
- Foundations of Measurements and Instrumentation, FUNDETEC, actions "Especialistas em Sistemas Industriais e Robóticos" and "Técnicos Base em Sistemas Industriais e Robóticos", in 1987;
- Laboratorial Instrumentation, FUNDETEC, actions "Especialistas em Sistemas Industriais e Robóticos" and "Técnicos Base em Sistemas Industriais e Robóticos", in 1987.

4.2.3 Seminars, Talks and Short-term Courses

- "Automated Measuring Systems for Environmental Monitoring". Invited talk under the IEEE Instrumentation and Measurement Society Distinguished Lecturer presented in Aristotle University of Thessaloniki, July 2018;
- "Globalization: past, present and future". Invited talk under the IEEE Instrumentation and Measurement Society Distinguished Lecturer presented in the American University of Armenia, June 2018;
- "Wireless Sensor Networks". Plenary talk under the IEEE Instrumentation and Measurement Society Distinguished Lecturer program presented at the 22nd IMEKO TC 4 International Symposium and 20-th International Workshop on ADC Modelling and Testing, 14-15 September 2017, Iasi, Romania;
- "Health Monitoring in Ambulatory Regime. Telecare". Invited talk as keynote speaker under the IEEE Instrumentation and Measurement Society Distinguished Lecturer presented at the 13th International Conference on Healthcare and Life Science Research (ICHLSR), May 26-27, 2017, Lisbon, Portugal;
- "Environmental Monitoring". Invited talk as keynote speaker under the IEEE Instrumentation and Measurement Society Distinguished Lecturer program presented at the IEEE Mexican Humanitarian Technology Conference 2017, March 29-31, 2017, Puebla, Mexico;
- "Meet I&M: Environmental Monitoring". Invited talk and participation in a

round table at the IEEE Mexican Humanitarian Technology Conference 2017, March 29-31, 2017, Puebla, Mexico;

- "Wireless Sensor Networks and their Applications". Plenary talk under the IEEE Instrumentation and Measurement Society Distinguished Lecturer program presented at the World Congress on Engineering and Applications - 2016 (WCEA - 2016), 16 -17 December 2016, Bangkok, Thailand;
- "Automated Measuring Systems for Environmental Monitoring". Invited talk as keynote speaker under the IEEE Instrumentation and Measurement Society Distinguished Lecturer program presented at the Second International Symposium on Intelligent Systems Technologies and Applications (ISTA'16), September 21-24, 2016, Jaipur, India;
- "Tactile Sensors for Industrial, Medical and Robotic Applications", 7th International Conference on Advanced Concepts on Mechanical Engineering (ACME 2016). Invited talk as keynote speaker under the IEEE Instrumentation and Measurement Society Distinguished Lecturer program in Plenary Session, Iasi, Romania, 9th June 2016;
- "Wireless Sensor Networks for Smart/Precise Agriculture", 7th International Conference on Advanced Concepts on Mechanical Engineering (ACME 2016). Invited talk under the IEEE Instrumentation and Measurement Society Distinguished Lecturer program in Session ACME-07-01 Technologies in Agriculture and Food Processing, Iasi, Romania, 9th June 2016;
- "Microwave Doppler Radar in Unobtrusive Health Monitoring", invited talk in 2014 Joint IMEKO TC1-TC7-TC13 Symposium, Funchal, Madeira Island, 4th September 2014;
- "Marine Technology Instrumentation", short-term course, The IP Martin Summer School Marine Technology Instrumentation, Technical University of Catalonia (UPC), 29th June - 18th, July 2014;
- Invited Professor, Warsaw University of Technology, May-June 2014. Seminars on:
  "Directives, Standards, Regulation, Industrial property"

"Health Monitoring"
"Environmental Monitoring"
"Tactile Sensors: Industrial, Robotic and Medical Applications"
"Wireless Sensor Networks (WSN)"
"Globalization: The World today and in the future"

- "Registo de Saúde Electrónico: Porquê? Como?", invited talk in seminar "Relação Terapêutica em Enfermagem. A Multidimensionalidade da Comunicação, 4-5 January 2013;
- "Redes Sem Fios de Sensores (Wireless Sensor Networks)", invited talk, 2012-2013 Academic Year Opening Ceremony, Escola Naval, 16th November 2012;
- "Smart System for Biological Parameters Monitoring Based on NI Technology", invited talk, NI Days2007, April 2007;
- "Automated Remote Electronic Instrumentation: Virtual Instrumentation", (http://db.intersek.ntnu.no/athens/catalog/show/137), IST1 course, Athens Programme, March 2007;
- "Sensores de Fibras Ópticas", invited talk, Mestrado em Recuperação e Conservação do Património Construído, Instituto Superior Técnico, May 2006;
- "National Instruments and the IT Instrumentation and Measurements Group", invited talk, NIDays, March 2006;
- "Formação e Qualificação de Técnicos de Instalações Eléctricas", seminar, CS-01 of CNQ, June 2002;
- "Uma Visão sobre Metrologia: Presente e Futuro"; invited speaker, Plenary Session of Jornadas de Engenharia de Automação, Controlo e Instrumentação, Escola Superior de Tecnologia do Instituto Politécnico de Setúbal, May 2002;
- Invited talks: "Qualidade; Acreditação de Laboratórios de Calibração e de Ensaios; Compatibilidade Electromagnética"; invited lesson, "Controlo e Transmissão de Dados em Sistemas de Medida via RS 232 e IEEE 488", Convénio ICCTI/UEM (Projecto 423 UEM), Universidade Eduardo Mondlane, Maputo, República of Mozambique, November 2001;

- "Desenvolvimento e Teste de Conversores A/D", seminar, Instituto de Engenharia de Sistemas e Computadores (INESC), January 2000;
- "Ensino Universitário e Cursos Técnicos Profissionais", in seminar "A Qualidade no Sector Eléctrico", Comissão Sectorial 01 (CS-01), Conselho Nacional da Qualidade (CNQ), November 1999;
- Qualidade (Quality) and Compatibilidade Electromagnética - Directivas Comunitárias, Normas e Ensaios (Electromagnetic Compatibility – Directives, Standards and Tests), Programme SOCRATES: Higher Education ERASMUS, Faculty of Electrical Engineering, "Gh. Asachi" Technical University, Iasi, Romania, January 1999;
- "Compatibilidade Electromagnética" (Electromagnetic Compatibility), IEEE chapters Industry Applications Society, Industrial Electronic Society and Power Electronic Society, Instituto Superior Técnico and Instituto de Telecomunicações, January 1998;
- "Interferência e Compatibilidade Electromagnéticas (EMI/EMC)" (Electromagnetic Interference and Susceptibility), Departamento de Armas e Electrónica, Escola Naval, 5th and 6th June 1995.

4.2.4 Juries for Professional Positions

Director of the Metrology Department, Instituto Português da Qualidade, I.P, IPQ, April 2016.

Director of Unit National Metrology Laboratory, Instituto Português da Qualidade, I.P, IPQ, January 2015.

Director of the Metrology Department, Instituto Português da Qualidade, I.P, IPQ, February 2010.

Buildings and Spaces Manager, Departamento de Engenharia Electrotécnica e de Computadores, IST/UTL, December 2010.

Coordinator of the Administrative Services, Departamento de Engenharia Electrotécnica e de Computadores, IST/UTL, December 2010.

Finance Services Coordinator, Departamento de Engenharia Electrotécnica e de

Computadores, IST/UTL, December 2010.

4.2.5 Other Juries

Prémio Inovação Jovem Engenheiro, Ordem dos Engenheiros, 2010.

5. RESEARCH AND DEVELOPMENT

5.1 R&D and Other Projects

5.1.1 "TailorPhy - Smart Sensors and Tailored Environments for Physiotherapy", FCT 2016-2019;

5.1.2 "EHR-Physio - Electronic Health Records: Needs, Requirements, and Barriers of Adoption in Physiotherapy", FCT, 2013-2015;

5.1.3 "ENVIAS - Assessment of the Contribution of Environmental Factors to the Prevalence and Exacerbation of Asthma in School Children", PTDC/AAG-MAA/4609/2012, FCT, 2012;

5.1.4 "Compo-ball", European Union, FP7, 2011-2013;

5.1.5 "EHR-Wheel - Electronic Health Records for Wheelchairs Users", RIPD/APD/109639/2009, FCT, 2010-2012;

5.1.6 "Heavy Metals Sensors for in-situ, Online Water Quality Monitoring System", FCT, 2010;

5.1.7 "Home telecare", PT Inovação, 2010;

5.1.8 "Blood Pressure Measurement", IEEE Instrumentation and Measurement, TC-25 Committee;

5.1.9 **"**SMARTCOL - Modelação e Controlo Inteligente de Processos em Coluna Utilizando Sistemas Distribuídos de Sensores e Actuadores – Caso de Estudo: Extracção Líquido-Líquido". (Modelling and Smart Control of Column Processes Using Sensors and Actuators Distributed Systems – Case Study: Liquid-Liquid Extraction);

5.1.10 "SSNet-MEMS - Redes de Sensores Inteligentes para Sistemas Móveis de Monitorização Ambiental" (Smart Sensors Networks for Mobile Environmental

Monitoring Systems);

5.1.11 "SmartCare - Ambientes Inteligentes Baseados em Sensores Distribuídos Não-obstrutivos para Cuidados de Saúde" (Smart Environments Based on Non-obstrutive Distributed Sensors for Healthcare);

5.1.12 "StresAlc - Reactividade ao Stress, Stress Diário e o Consumo de Álcool nos Jovens" (Reactivity to Stress, Daily Stress and Alcohol Consumption in Youngsters);

5.1.13 "Corredor de Bus Intermitente (CBI)" (Intermittent Bus Lane);

5.1.14 "STRUCTMONIT- Monitorização e Modelação de Estruturas de Engenharia Civil Utilizando Sensores Ópticos de Redes de Bragg" (Monitoring and Modelling of Civil Engineering Structures using Bragg Gratings);

5.1.15 Ciencia Viva CV-1572-2006 "GOA - Listening Dolphins and Measuring the Water Quality Where They Live", 2006-2008;

5.1.16 National Network for Brain Imaging, Lisbon Consortium;

5.1.17 "SMARDO - Smart System for Monitoring of Wild Dolphin – Anthropogenic Factors Interactions", IT, 2005-2008;

5.1.18 "TIM - Magnetic Induction Tomography- Development of the instrumentation and measuring methods for biomedical applications", POSI/EEA-ESE/60397/2004, FCT, 2005-2008;

5.1.19 **"**Disseminação horária pelo território nacional (continente, Madeira e Açores)" (Time dissemination in Portugal), IPQ, 2004;

5.1.20 "ESPECTRO - Monitorização e controlo do espectro - Integração de infra-estruturas" (Monitoring and control of the spectrum – Infrastructures' integration), ANACOM, 2002-2011;

5.1.21 "Actualização e Extensão das Capacidades de Medição do Grupo de Instrumentação e Medidas do Instituto de Telecomunicações – Lisboa" (Actualization and Extension of the Measuring Capabilities of the Institute of Telecomunications – Lisbon - Instrumentation and Measurements Group, Conc-REEQ/1118/2001, FCT, 2002;

5.1.22 "AQA - Monitorização Global com Sensores Inteligentes para Avaliação da Qualidade do Ambiente" (Global Monitoring with Smart Sensors for Environment Quality Evaluation), PNAT/1999/EEI/15052, FCT, 2001-2005;

5.1.23 **"**Metrological Characterisation of Analog-to-Digital Converters Based Instruments, "MECADIN"". Submitted in 1999 to the EC GROWTH program, 5th Framework Programme;

5.1.24 **"**EUropean Project for ADC-based devices Standardization (EUPAS)", 1998-2009;

5.1.25 "Remote Monitoring and Control of Industrial Environments", submitted in July 1998 to NATO Science for Peace Program;

5.1.26 Services to Laboratório de Metrologia e Ensaios do CET (LMECET), Portugal Telecom (PT), SA, July 1998 to January 1999;

5.1.27 "Health Emergency Management and Coordination through Telemetric Operational Resources (HECTOR), Instituto Nacional de Emergência Médica (INEM), July 1997 to December 1998;

5.1.28 SPRINT RA 083, "Technical Assistance to Industry to Minimize Electrostatic Problems", 1990-1993;

5.1.29 "Cálculo do Campo Electromagnético em Estruturas e Dispositivos das Telecomunicações e da Energia" (Determination of the Electromagnetic Field in Telecomunications and Energy Structures), Program CIENCIA, Subprogram III, Medida M -Ciências Exactas e da Engenharia, contract nº0013/M/90, 1990;

5.1.30 Between 1988 and 1994, Electromagnetismo Aplicado, Centro de Electrotecnia da Universidade Técnica de Lisboa:

- "Fenómenos de Histerese Magnética" (Magnetic Hysteresis Phenomena);
- "Aplicações da Óptica em Electrotecnia" (Applications of Optics to Electrotechnics);
- "Métodos Numéricos Aplicados ao Cálculo do Campo Electromagnético" (Application of Numerical Methods to Electromagnetic Fields Evaluation).

Between December 1994 and October 1998, Centro de Electrotecnia Teórica e Medidas Eléctricas, Instituto Superior Técnico:

Linha 1 – Electromagnetismo Aplicado (Applied Electromagnetism)
Projecto 1B – "Aplicações da Óptica em Electrotecnia"; (Applications of Optics to Electrotechnics)
Projecto 1C – "Fenómenos de Histerese Magnética" (Magnetic Hysteresis Phenomena).

Linha 3 – Sistemas de Medida (Measuring Systems)
Projecto 3A – "Métodos de Medida" (Methods of Measurement);
Projecto 3B – "Automatização de Procedimentos de Medida" (Automation of Measurement Procedures);
Projecto 3C – "Instrumentação Electrónica" (Electronic Instrumentation).

5.2 Participation in Scientific Research Institutions

5.2.1 Instituto de Telecomunicações - Grupo de Instrumentação e Medidas – since October 1997. Founder of Grupo de Instrumentação e Medidas, Senior Researcher, Group Leader and until 2020, Basic Sciences and Enabling Technologies Scientific Area Coordinator;

5.2.2 Instituto de Energia - INTERG, researcher and project leader from 1990 to 1999;

5.2.3 Centro de Electrotecnia Teórica e Medidas Eléctricas do Instituto Superior Técnico, researcher, project leader and collaborator since 1994 until October 2000;

5.2.4 Centro de Electrotecnia da Universidade Técnica de Lisboa, Instituto Nacional de Investigação Científica, researcher and project leader, since 1976 until its extinction.

5.3 Participation in International Congresses and Scientific Meetings

5.3.1 The 12th International Symposium on Advanced Topics in Electrical Engineering (ATEE 2021), March 2021, Bucharest, Romania;

5.3.2 The 11th International Symposium on Advanced Topics in Electrical Engineering (ATEE 2019), March 2019, Bucharest, Romania;

5.3.3 XXII IMEKO World Congress, September 2018, Belfast, Great Britain;

5.3.4 22nd IMEKO TC4 Symposium and 20th International Workshop on ADC Modelling and Testing, September 2017, Iaşi, Romania;

5.3.5 13th International Conference on Healthcare and Life Science Research (ICHLSR), 26-27 May 2017, Lisbon, Portugal;

5.3.6 IEEE Mexican Humanitarian Technology Conference 2017, March 2017, Puebla, Mexico;

5.3.7 World Congress on Engineering and Applications - 2016 (WCEA - 2016), December, 2016, Bangkok, Thailand;

5.3.8 Second International Symposium on Intelligent Systems Technology and Applications (IST'16), September 2016, Jaipur, India;

5.3.9 The 6th International Conference on Advanced Concepts on Mechanical Engineering (ACME2016), June 2016, Iasi, Romania;

5.3.10 IEEE Instrumentation and Measurement Technology Conference, May 2016, Taipei, Taiwan;

5.3.11 2014 Joint IMEKO TC1-TC7-TC13 Symposium, Funchal, Madeira Island, September 2014;

5.3.12 2014 IEEE International Symposium on Medical Measurements and Applications - MeMeA, June 2014, Lisbon, Portugal;

5.3.13 IMEKO Symposium on Temperature and Thermal Measurements in Industry and Science (TEMPMEKO 2013), October 2013, Funchal, Madeira, Portugal;

5.3.14 IMEKO 17th TC4 and 3rd TC19 Symposium, Kosice, Slovakia, September 2010;

5.3.15 IEEE International Conference on Industrial Technology, Vina del Mar, Chile, March 2010;

5.3.16 XIX IMEKO World Congress, September 2009, Lisbon, Portugal;

5.3.17 IMEKO 2nd TC 19 Symposium, Budapest, Hungary, September 2008;

5.3.18 IMEKO 20th TC3 & 3rd TC16 & 1st TC22 International Conference, Mérida, México, November 2007;

5.3.19 2^{a} Conferência Nacional da Sociedade Portuguesa de Metrologia, Funchal, Madeira, October 2007;

5.3.20 IMEKO TC4-TC19 Symposium, Iasi, Romania, September 2007;

5.3.21 IMEKO TC18, The 3rd International Symposium on Measurement, Analysis and Modeling of Human Functions (ISHF 2007), June 2007, Lisbon, Portugal;

5.3.22 Conftele 2007, Peniche, Portugal, May 2007;

5.3.23 IEEE International Conference on Industrial Technology, (ICIT 2006), December 2006, Mumbai, India;

5.3.24 The 5th IEEE Conference on Sensors, IEEE Sensors 2006, October 2006, Daegu, South Korea;

5.3.25 AMSE (Association for the Advancement of Modelling and Simulation Techniques in Enterprises) International Conference on Model and Simulation: Models and Simulation in Economy and Administration, September 2006, Bahia Blanca, Argentina;

5.3.26 IMEKO World Congress, September 2006, Rio de Janeiro, Brazil;

5.3.27 IMEKO TC1 and TC7 Symposium on Metrology and Measurement Applications in the Era of Internet Working, September 2005, Ilmenau, Germany;

5.3.28 14th TC4 Symposium of IMEKO, September 2005, Gdynia, Poland;

5.3.29 VII Conference on Advanced Mathematical and Computational Tools in Metrology, June 2005, Costa da Caparica, Portugal;

5.3.30 Conftele 2005, April 2005, Tomar, Portugal;

5.3.31 IMEKO TC-4 Symposium on Measurements for Research and Industrial Applications and 9th Workshop on ADC Modeling and Testing, Athens, Greece, September 2004;

5.3.32 IEEE Third International Conference on Signals, Systems, Devices, March 2004, Sousse, Tunisia;

5.3.33 XVII IMEKO World Congress, Dubrovnik, Croatia, 2003;

5.3.34 The First IEEE International Conference on Sensors, IEEE Sensors 2002, June 2002, Orlando, Florida, USA;

5.3.35 Fifth International Conference on Electronic Measurement & Instruments, November 2001, Guilin, Popular Republic of China;

5.3.36 6º Seminário Anual de Automática, Electrónica Industrial e Instrumentacion (SAAEI2001), September 2001, Matanzas, Cuba;

5.3.37 11th International Symposium on Trends in Electrical Measurements and Instrumentation and the 6th Workshop on ADC Modelling and Testing, IMEKO TC-4, September 2001, Lisbon, Portugal;

5.3.38 METROLOGIA 2000, December 2000, S. Paulo, Brazil;

5.3.39 IEEE Conference on Precision Electromagnetic Measurement (CPEM 2000), May 2000, Sidney, Australia;

5.3.40 International Conference on Electrical and Power Engineering (EPE'99), November 1999, Iasi, Romania;

5.3.41 Conftele'99, April 1999, Sesimbra, Portugal;

5.3.42 5th IEEE International Conference on Electronics, Circuits and Systems (ICECS'98), September 1998, Lisbon, Portugal;

5.3.43 IEEE MELECON'98, May 1998, Tel-Aviv, Israel;

5.3.44 XIV IMEKO World Congress, June 1997, Tampere, Finland;

5.3.45 IEEE IMTC/97, May 1997, Ottawa, Canada;

5.3.46 IEEE AFRICON'96, September 1996, Stellenbosch, South Africa;

5.3.47 IMEKO TC-4, 7th International Symposium on Modern Electrical and Magnetic Measurement, September 1995, Prague, Czech Republic;

5.3.48 IEEE Instrumentation and Measurement Technology Conference, May 1994, Hamamatsu, Japan;

5.3.49 IEEE MELECON´94, April, 1994, Antalya, Turkey;

5.3.50 IEEE AFRICON'92, September 1992, Swaziland;

5.3.51 CIGRE WG33 Meeting, September 1990, Estoril, Portugal, September;

5.3.52 IEEE Instrumentation and Measurement Technology Conference (IMTC/86), March 1986, Boulder, Colorado, USA.

5.4 Organization of Congresses and Scientific Meetings

5.4.1 International

5.4.1.1 Scientific Committee Member, 20th IEEE International Multi-Conference on Systems, Signals & Devices 2023, February 2023, Mahdia, Tunisia;

5.4.1.2 Steering Committee Member, 7th International conference on Intelligent Technologies (ICIT – 2022), December 2022, Jakarta, Indonesia;

5.4.1.3 Scientific Committee Member, Joint IMEKO TC1-TC7-TC13-TC18 Symposium 2022: "Cutting-edge measurement science for the future", August 31st - September 1st, Porto, Portugal;

5.4.1.4 Co-chair and International Program Committee Member, 6th World Congress on Engineering and Applications (WCEA - 2021), December 2021, Singapore;

5.4.1.5 International Steering Committee Member, The 12th International Symposium on Advanced Topics in Electrical Engineering (ATEE 2021), March 2021, Bucharest, Romania;

5.4.1.6 International Program Committee Member, IMEKO TC1-TC7-TC13-TC18 Symposium, July 2020, Warsaw, Poland;

5.4.1.7 International Programme Committee Member, 4th World Congress on Engineering and Applications (WCEA – 2019), December 2019, Bali, Indonesia;

5.4.1.8 Technical Program Committee Member, Fourth International Symposium on Intelligent Systems Technologies and Applications (ISTA'19), December 2019, Trivandrum, Kerala, India;

5.4.1.9 Technical Program Co-Chair and Technical Committee Member, 2nd International Symposium on Sensors and Instrumentation in Internet of Things Era (ISSI), August 2019**,** Lisbon, Portugal;

5.4.1.10 Organizing Committee, IMEKO 18th International Flow Measurement

Conference (Flomeko2019), June 2019, Lisbon, Portugal;

5.4.1.11 International Steering Committee Member, The 11th International Symposium on Advanced Topics in Electrical Engineering (ATEE 2019), March 2019, Bucharest, Romania;

5.4.1.12 International Program Committee Member, 2018 IEEE International Workshop on Metrology for the Sea, October 2018, Bari, Italy;

5.4.1.13 Technical Program Committee Member, International Conference on Sensing and Instrumentation in IoT Era (ISSI'18), September 2018, Shanghai, China;

5.4.1.14 Technical Program Committee Member, Fourth International Symposium on Intelligent Systems Technologies and Applications (ISTA'18), September 2018, Bangalore, India;

5.4.1.15 International Program Committee Member, The 2018 IEEE International Conference on INnovations in Intelligent SysTems and Applications (INISTA 2018), July 2018, Thessaloniki, Greece;

5.4.1.16 International Program Committee Member, 1st ASRES International Conference on Modeling, Analysis and Optimization (MAO – 2018), July 2018, Amsterdam, Netherlands.

5.4.1.17 Smart Cities Symposium (SCS'18), April 2018, University of Bahrain, Kingdom of Bahrain;

5.4.1.18 International Program Committee Member, 22nd IMEKO TC4 Symposium and 20th International Workshop on ADC Modelling and Testing, September 2017, Iaşi, Romania;

5.4.1.19 Steering Committee Member, International Conference on Advances in Computing, Communications and Informatics (ICACCI'17), September 2017, Karnataka, India;

5.4.1.20 Technical Program Committee Member, Third International Symposium on Intelligent Systems Technologies and Applications (ISTA'17), September 2017, Karnataka, India;

5.4.1.21 International Advisory Committee and International Program Committee Member, IMEKO TC19 Symposium on Environmental Instrumentation and Measurements (EnvImeko), August 2017, Aguascalientes, Mexico;

5.4.1.22 International Program Committee Member, 2017 Joint IMEKO TC1-TC7-TC13 Symposium: "Measurement Science Challenges in Natural and Social Sciences", July/August 2017, Rio de Janeiro, Brazil;

5.4.1.23 Technical Program Committee Member, 2017 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2017, Torino, Italy;

5.4.1.24 International Steering Committee Member, The 10th International Symposium on Advanced Topics in Electrical Engineering (ATEE 2017), March 2017, Bucharest, Romania;

5.4.1.25 International Programme Committee Member, World Congress on Engineering and Applications - 2016 (WCEA - 2016), December, 2016, Bangkok, Thailand;

5.4.1.26 Technical Program Committee Member, The Second International Symposium on Emerging Topics in Circuits and Systems (SET-CAS'16), September 2016, Jaipur, India;

5.4.1.27 Program Committee Member, 2016 International Symposium on Innovations in Intelligent Systems and Applications (INISTA 2016), August 2016, Sinaia, Romania;

5.4.1.28 Honorary Committee Member, 2016 The 7th International Conference on Advanced Concepts in Mechanical Engineering (ACME 2016), June 2016, Iasi, Romania;

5.4.1.29 Program Committee Member, 2015 International Symposium on Innovations in Intelligent Systems and Applications (INISTA 2015), September 2015, Madrid, Spain;

5.4.1.30 Technical Program Committee Member, International Symposium on Emerging Topics in Circuits and Systems (SET-CAS'15), August 2015,

Kerala, India;

5.4.1.31 Technical Program Committee Member, 2015 International Conference on Smart Sensors and Application (ICSSA2015), May 2015, Kuala Lumpur, Malaysia;

5.4.1.32 Technical Program Committee Member, 2015 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2015, Pisa, Italy;

5.4.1.33 International Steering Committee Member, IEEE "Advanced Topics in Electrical Engineering" – ATEE 2015, May 2015, Bucharest, Romania;

5.4.1.34 International Steering Committee Member, The 9th International Symposium on Advanced Topics in Electrical Engineering (ATEE 2015), March 2015, Bucharest, Romania;

5.4.1.35 Technical Program Committee Member, IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (IEEE SPICES 2015), February 2015, Kozhikode, India;

5.4.1.36 Technical Program Committee Member, IEEE International Conference on Smart Instrumentation, Measurements and Applications - ICSIMA, November 2014, Kuala Lumpur, Malaysia;

5.4.1.37 International Programme Committee Member, 2014 Joint IMEKO TC1-TC7-TC13 Symposium, September 2014, Madeira, Portugal;

5.4.1.38 Scientific Committee Member, The 6th International Conference on Advanced Concepts in Mechanical Engineering (ACME 2014), June 2014, Iasi, Romania;

5.4.1.39 Co-chair, 2014 IEEE International Symposium on Medical Measurements and Applications – MeMeA, June 2014, Lisbon, Portugal;

5.4.1.40 Program Committee Member, 2014 IEEE International Symposium on Innovations in Intelligent Systems and Applications (IEEE INISTA 2014), June 2014, Arberobello, Italy;

5.4.1.41 Technical Program Committee Member, 2014 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2014, Montevideo, Uruguay;

5.4.1.42 Technical Program Committee Member, IEEE 11th International Multi-Conference on Systems, Signals & Devices (SSD'14), February 2014, Castelldefels-Barcelona, Spain;

5.4.1.43 Technical Program Committee Member, 2013 IEEE International Conference on Smart Instrumentation, Measurement and Applications, November 2013, Kuala Lumpur, Malaysia;

5.4.1.44 National Committee, IMEKO Symposium on Temperature and Thermal Measurements in Industry and Science (TEMPMEKO 2013), October 2013, Funchal, Madeira, Portugal;

5.4.1.45 Technical Program Committee Member, 2013 IEEE International Conference on Computational Intelligence and Virtual Environment for Measurement Systems and Applications (IEEE CIVEMSA 2013), July 2013, Milan, Italy;

5.4.1.46 General Co-chair, 4th IMEKO TC19 Symposium on Environmental Instrumentation and Measurements "Protecting Environment, Climate Changes and Pollution Control", June 2013, Lecce, Italy;

5.4.1.47 International Steering Committee Member, The 8th International Symposium on Advanced Topics in Electrical Engineering (ATEE 2013), May 2013, Bucharest;

5.4.1.48 Technical Program Committee Member, 2013 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2013, The Depot, Minneapolis, MN, USA;

5.4.1.49 Technical Program Committee Member, IEEE 11th International Multi-Conference on Systems, Signals & Devices (SSD'13), March 2013, Hammamet, Tunisia;

5.4.1.50 Program Committee Member, 2012 International Conference and Exposition on Electrical and Power Engineering (IEEE EPE2012),

October 2012, Iasi, Romania;

5.4.1.51 International Programme Committee Member, XX IMEKO World Congress, September 2012, Busan, Republic of Korea;

5.4.1.52 Scientific Committee Member, The 5th International Conference on Advanced Concepts on Mechanical Engineering, June 2012, Iasi, Romania;

5.4.1.53 Technical Program Committee Member, 2012 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2012, Graz, Austria;

5.4.1.54 Technical Program Committee Member, IEEE 9th International Multi-Conference on Systems, Signals & Devices (SSD'12), March 2012, Chemnitz, Germany;

5.4.1.55 Organising Committee, Joint IMEKO TC11 TC19 TC20 International Symposia Metrological Infrastructure Environmental and Energy Measurements, International Symposium of Energy Agencies of Mediterranean Countries, Mediterranean Industry of the Sun, June 2011, Dubrovnik Riviera, Cavtat, Croatia;

5.4.1.56 Technical Program Committee Member, 2011 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2011, Binjang, Hangzhou, China;

5.4.1.57 Technical Program Committee Member, IEEE 8th International Multi-Conference on Systems, Signals & Devices (SSD'11), March 2011, Sousse, Tunisia;

5.4.1.58 Technical Program Committee Member, IEEE Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems, VECIMS 2010, September 2010, Taranto, Italy;

5.4.1.59 International Programme Committee Member, 17th Symposium IMEKO TC 4 - Measurement of Electrical Quantities, 15th International Workshop on ADC Modelling and Testing, 3rd Symposium IMEKO TC 19 - Environmental Measurements,

"Instrumentation for the Information and Communication Technology Era", September 2010, Kosice, Slovakia;

5.4.1.60 Technical Program Committee Member, IEEE 7th International Multi-Conference on Systems, Signals & Devices (SSD'10), June 2010, Amman, Jordan;

5.4.1.61 Technical Program Committee Member, 2010 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2010, Austin, Texas, USA;

5.4.1.62 XIX IMEKO World Congress General Chairman, September 2009, Lisbon, Portugal;

5.4.1.63 Technical Program Committee Member, 2009 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2009, Singapore;

5.4.1.64 Program Committee Member, 2009 IEEE Workshop on Computational Intelligence in Virtual Environments, March-April 2009, Nashville, TN, USA;

5.4.1.65 Technical Program Committee, IEEE 6th International Multi-Conference on Systems, Signals and Devices, March 2009, Djerba, Tunisia;

5.4.1.66 International Conference on Metrology of Environmental, Food and Nutritional Measurements MEFNM 2008 Co-Chairman, September 2008, Budapest, Hungary;

5.4.1.67 International Program Committee Member, TC1-TC7 IMEKO Joint Symposium on "Man, Science & Measurement", September 2008, Annecy, France;

5.4.1.68 Technical Program Committee Member, 2008 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2008, Victoria, Canada;

5.4.1.69 International Program Committee Member, First International Symposium on Environmental Testing Engineering (ETE' 2007),

November 2007, Brussels, Belgium;

5.4.1.70 International Programme Committee Chairman, 1st IMEKO TC19 Symposium, September 2007, Iasi, Romania;

5.4.1.71 Program Committee Member, IEEE Fourth International Multi-Conference on Systems, Signals & Devices (SSD'07), March 2007, Hammamet, Tunisia;

5.4.1.72 Technical Program Committee Member, IEEE Sensors 2006, October 2006, Daegu, South Korea;

5.4.1.73 International Programme Committee Member, IMEKO XVIII World Congress Metrology, Metrology for a Sustainable Development, September 2006, Rio de Janeiro, Brazil;

5.4.1.74 Technical Program Committee Member, IEEE Sensors 2005, October/November 2005, Irvine, California, USA;

5.4.1.75 International Program Committee Member, IMEKO TC1 and TC7 Symposium on Metrology and Measurement Applications in the Era of Internet Working, September 2005, Ilmenau, Germany;

5.4.1.76 International Program Committee Member, VII Conference on Advanced Mathematical and Computational Tools in Metrology, AMCTM 2005, June 2005, Lisbon, Portugal;

5.4.1.77 Technical Program Committee Member, IEEE Sensors 2004, October 2004, Wien, Austria;

5.4.1.78 Technical Program Committee Member, IEEE Sensors 2003, October 2003, Toronto, Canada;

5.4.1.79 Technical Programme Committee Member, The Eurosensors XVII Conference, September 2003, Guimarães, Portugal;

5.4.1.80 Technical Program Committee Member, IEEE Sensors 2002, June 2002, Orlando, Florida, USA;

5.4.1.81 National Organizing Committee Member, 11th International Symposium on Trends in Electrical Measurements and Instrumentation

and the 6th Workshop on ADC Modelling and Testing, IMEKO TC-4, September 2001, Lisbon, Portugal;

5.4.1.82 Special Session WP6 - ADC Testing, International Conference on Electronics, Circuits and Systems (ICECS´98) Organizer (with Prof. António Cruz Serra), September 1998, Lisbon, Portugal;

5.4.1.83 Organizing Committee Member, 9th EAEEIE International Conference on Education in Electrical and Information Engineering -Enhancement of Education in Electrical and Information Engineering Through Industry Co-Operation and Research, May 1998, Lisbon, Portugal.

5.4.2 National or Mainly Regional

5.4.2.1 Organizing Commission Member, 7º Encontro Nacional da SPMET, Medições para os Transportes, Lisbon, November 2017;

5.4.2.2 Organizing Commission Member, CONFMET2016, November 2016, Évora, Portugal;

5.4.2.3 Technical Committee Member, 10ª Conferência de Telecomunicações (Conftele 2015), May 2015, Aveiro, Portugal;

5.4.2.4 Organizing Commission Member, 6º Encontro Nacional da SPMET, Luz, Visão e IMAGEM - Medição e Inovação, Lisbon, March 2015;

5.4.2.5 Organizing Commission Member, CONFMET2014, June 2014, Lisbon, Portugal;

5.4.2.6 Technical Committee Member, 9ª Conferência de Telecomunicações (Conftele 2013), May 2013, Castelo Branco, Portugal;

5.4.2.7 Organizing Commission Member, 5º Encontro Nacional da SPMET, Medir para a Segurança, November 2012, Coimbra, Portugal;

5.4.2.8 Organizing Commission Member, 4º Encontro Nacional da SPMET, Metrologia Suporte da Competitividade na Indústria, Oeiras, November 2011;

5.4.2.9 Organizing Commission Member, 3ª Conferência Nacional da Sociedade Portuguesa de Metrologia CONFMET2010, November

2010, Lisbon, Portugal;

5.4.2.10 Organizing Commission Member, 3º Encontro Nacional da Sociedade Portuguesa de Metrologia, October 2008, Porto, Portugal;

5.4.2.11 Scientific Commission Member, Encontro Nacional sobre Instrumentação Científica e Metrologia Aplicadas à Engenharia Civil, Laboratório Nacional de Engenharia Civil, November 2007, Lisbon, Portugal;

5.4.2.12 Organizing Commission Member, 2ª Conferência Nacional Metrologia e Inovação, October 2007, Funchal, Madeira, Portugal;

5.4.2.13 Technical Committee Member, 6ª Conferência de Telecomunicações (Conftele 2007), May 2007, Peniche, Portugal;

5.4.2.14 Organizing Commission Member, 2º Encontro Nacional da Sociedade Portuguesa de Metrologia, November 2006, Lisbon, Portugal;

5.4.2.15 Organizing Commission Member, 1º Encontro Nacional da Sociedade Portuguesa de Metrologia, November 2004, Lisbon, Portugal;

5.4.2.16 Scientific Commission Member, Conferência Científica Tecnologia de Engenharia (CCTE 2002), May 2002, Lisbon, Portugal;

5.4.2.17 Organizing Commission Member, Congresso Nacional da Qualidade 2000, June 2000, Lisbon, Portugal;

5.4.2.18 International Steering Committee Member, International Conference on Electrical and Power Engineering (EPE'99), November 1999, Iasi, Romania;

5.5 Research/Project Evaluation

5.5.1 Editorial Boards

5.5.1.1 Special issue "Smart Wearable Sensors and Systems for Healthcare Monitoring", Sensors, MDPI AG, Switzerland, 2021. Pedro Silva Girão, Octavian Postolache (Editors);

5.5.1.2 Metrology, (ISSN xxxx-3792), MDPI, Switzerland, since 2020;

5.5.1.3 Sensor Networks, Sensors (ISSN 1424-8220), MDPI, Switzerland,

since 2019;

5.5.1.4 Special issue “Advanced Sensing Technologies for Environmental Monitoring and Biomedical Applications”, Sensors, MDPI AG, Switzerland, 2019. Pedro Silva Girão, Octavian Postolache, Sergio Rapuano (Editors);

5.5.1.5 Special issue “Assistive Devices and Sensors”, Sensors, MDPI AG, Switzerland, 2019. Pedro Silva Girão, Octavian Postolache, Edward Sazonov (Editors);

5.5.1.6 IEEE I&M Video Tutorials Associate Editor, 2019;

5.5.1.7 Special issue "Tactile Sensors and Applications", Sensors, MDPI AG, Switzerland, 2018. Pedro Silva Girão, Pedro Pinto Ramos, Perla Maiolino (Editors);

5.5.1.8 IET Science, Measurement & Technology, Associate Editor, 2018-2020;

5.5.1.9 Special issue "Intelligent Sensing Technologies for Nondestructive Evaluation", Sensors, MDPI AG, Switzerland, 2017. Seunghee Park, Aimé Lay-Ekuakille, Octavian Postolache, Pedro Silva Girão (Editors);

5.5.1.10 International Journal of Electronics, Communications, and Measurement Engineering (IJECME), former International Journal on Measurement Technologies and Instrumentation Engineering (IJMTIE), IRMA International, Associate Editor, since 2011;

5.5.1.11 Buletinul Institutului Politehnic din Iasi (Bulletin of the Polytechnic Institute of Iasi), since 2010;

5.5.1.12 International Journal of Computing & Information Technology (IJCIT), ISSN: 0974-696X, Serials Publications, India, since January 2009;

5.5.1.13 Sensors & Transducers Journal and Magazine, since July 2007;

5.5.1.14 Measurement, Elsevier, from November 2006 to 2017;

5.5.1.15 Transactions on Systems, Signals and Devices (TSSD), SHAKER-VERLAG (ISSN 1861-5252, Germany), November 2005;

5.5.2 Reviewer - Publications

5.5.2.1 IEEE Transactions on Automation Science and Engineering, since January 2018;

5.5.2.2 Journal of Healthcare Engineering, Hindawi Publishing Corporation, since January 2018;

5.5.2.3 Nuclear Instruments and Methods in Physics Research, A, since January 2018;

5.5.2.4 IRBM - Innovation and Research in BioMedical Engineering, Elsevier, since 2017;

5.5.2.5 Early Human Development, Elsevier, since 2017;

5.5.2.6 Computer Methods and Programs in Biomedicine, Elsevier, since 2016;

5.5.2.7 Mathematical Problems in Engineering, Hindawi Publishing Corporation, since 2016;

5.5.2.8 Review of Scientific Instruments, AIP, since 2016;

5.5.2.9 Scientific Research and Essays, Academic Journals, since 2016;

5.5.2.10 Computers in Biology and Medicine, Elsevier, since 2016;

5.5.2.11 Pervasive and Mobile Computing, Elsevier, since September 2015;

5.5.2.12 Journal of Computational Methods in Sciences and Engineering, IOP Press, since January 2015;

5.5.2.13 Sensors and Actuators: A. Physical, Elsevier, since November 2014;

5.5.2.14 Journal of Zhejiang University-SCIENCE C: Computers & Electronics, since October 2014;

5.5.2.15 Journal of The Institution of Engineers (India), Series B, Springer, since May 2014;

5.5.2.16 IEEE Transactions on Biomedical Circuits and Systems, since April 2014;

5.5.2.17 Machines, ISSN 2075-1702, MDPI Publishing, Basel, Switzerland, since November 2013;

5.5.2.18 Journal of Environmental Informatics, ISSN 1726-2135, International Society for Environmental Information Sciences, since April 2013;

5.5.2.19 Instrumentation Science & Technology (Taylor & Francis), 1073-9149 (Print), 1525-6030 (Online), since December 2012;

5.5.2.20 Sensors (ISSN 1424-8220; CODEN: SENSC9), MDPI Publishing, Basel, Switzerland, since September 2012;

5.5.2.21 Herald Journal of Environmental and Health Science, since July 2012;

5.5.2.22 IEEE Sensors Journal, since May 2012;

5.5.2.23 IEEE Signal Processing Letters, since May 2012;

5.5.2.24 Ocean Engineering, Elsevier, since May 2012;

5.5.2.25 Optics and Laser Technology, Elsevier, since June 2010;

5.5.2.26 International Journal of Computing & Information Technology (IJCIT), ISSN: 2279-0764, Serials Publications, India, since January 2009;

5.5.2.27 Sensors and Actuators, B, Elsevier, since 2008;

5.5.2.28 Sensors & Transducers Journal, ISSN: 2306-8515, e-ISSN 1726-5479 since July 2006;

5.5.2.29 Measurement, Elsevier, since November 2005;

5.5.2.30 Advanced Mathematical and Computational Tools in Metrology VII, Series on Advances in Mathematics for Applied Sciences, World Scientific Publishing Co., 2005;

5.5.2.31 IEEE Transactions on Instrumentation and Measurement, since 1997;

5.5.2.32 Wiley Encyclopedia of Electrical and Electronics Engineering, since 1997;

5.5.2.33 Caderno do CEFAT, 1996-2000.

5.5.3 Reviewer - Conferences

5.5.3.1 The 12th International Symposium on Advanced Topics in Electrical Engineering (ATEE 2021), March 2021, Bucharest, Romania;

5.5.3.2 5th International Symposium on Intelligent Systems Technologies and Applications (ISTA'19), December, 2019, Trivandrum, Kerala, India;

5.5.3.3 The 11th International Symposium on Advanced Topics in Electrical Engineering (ATEE 2019), March 2019, Bucharest, Romania;

5.5.3.4 International Conference on Sensing and Instrumentation in IoT Era (ISSI'18), September 2018, Shanghai, China;

5.5.3.5 XXII IMEKO World Congress, September 2018, Belfast, Great Britain;

5.5.3.6 Smart Cities Symposium (SCS'18), April 2018, University of Bahrain, Kingdom of Bahrain;

5.5.3.7 2017 Joint IMEKO TC1-TC7-TC13 Symposium: “Measurement Science Challenges in Natural and Social Sciences”, July/August 2017, Rio de Janeiro, Brazil;

5.5.3.8 2017 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2017, Torino, Italy;

5.5.3.9 The 10th International Symposium on Advanced Topics in Electrical Engineering (ATEE 2017), March 2017, Bucharest, Romania;

5.5.3.10 2016 International Conference and Exposition on Electrical and Power Engineering (EPE), October 20, 2016, Iasi, Romania;

5.5.3.11 International Symposium on Emerging Topics in Circuits and Systems (SET-CAS'16), September 2016, Jaipur, India;

5.5.3.12 Second International Symposium on Intelligent Systems Technologies and Applications (ISTA’16), September 21-24, 2016, Jaipur, India;

5.5.3.13 21st IMEKO TC4 Symposium on Measurements of Electrical Quantities (together with 19th TC4 International Workshop on ADC and DCA Modeling and Testing, IWADC), September 2016, Budapest, Hungary;

5.5.3.14 2016 International Symposium on INnovations in Intelligent SysTems and Applications (INISTA´16), August 2016, Sinaia, Romania;

5.5.3.15 2016 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2016, Taipei, Taiwan;

5.5.3.16 IEEE International Symposium on Medical Measurements and Applications – MeMeA, May 2016, Benevento, Italy; |

5.5.3.17 International Symposium on Emerging Topics in Circuits and Systems (SET-CAS'15), August 2015, Kerala, India;

5.5.3.18 2015 International Conference on Smart Sensors and Application (ICSSA2015), May 2015, Kuala Lumpur Malaysia;

5.5.3.19 The 9th International Symposium on Advanced Topics in Electrical Engineering (ATEE), May 2015, Bucharest, Romania;

5.5.3.20 2015 IEEE International Instrumentation & Measurement Technology

Conference - I2MTC, May 2015, Pisa, Italy;

5.5.3.21 IEEE SPICES 2015, IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems, February 2015, Kerala, India;

5.5.3.22 2014 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2014, Montevideo, Uruguay;

5.5.3.23 11^{h} International Multi-Conference on Systems, Signals & Devices (SSD'14), February 2014, Casteldefells, Spain;

5.5.3.24 2013 IEEE International Conference on Smart Instrumentation, Measurement and Applications (ICSIMA 2013), November 2013, Kuala Lumpur, Malaysia;

5.5.3.25 2013 International Workshop on Impedance Spectroscopy (IWIS 2013), 25-27 September, 2013, Chemnitz, Germany;

5.5.3.26 19th IMEKO TC-4 Symposium on Measurements of Electrical Quantities, 17th TC-4 Workshop IWADC on ADC and DAC Modeling and Testing, Barcelona, Spain, 18-19, July 2013;

5.5.3.27 2013 IEEE International Conference on Computational Intelligence and Virtual Environment for Measurement Systems and Applications (IEEE CIVEMSA 2013), July 2013, Milan, Italy;

5.5.3.28 2013 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2013, Minneapolis, USA;

5.5.3.29 XX IMEKO World Congress, September 2012, Busan, Republic of Korea;

5.5.3.30 2012 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2012, Graz, Austria;

5.5.3.31 9th International Multi-Conference on Systems, Signals & Devices (SSD'12), March 2012, Chemnitz, Germany;

5.5.3.32 2011 IEEE International Instrumentation & Measurement Technology Conference - I2MTC, May 2011, Binjang, Hangzhou, China;

5.5.3.33 8th International Multi-Conference on Systems, Signals & Devices (SSD'11), March 2011, Sousse, Tunisia;

5.5.3.34 17th Symposium IMEKO TC 4 - Measurement of Electrical Quantities, 15th International Workshop on ADC Modelling and Testing, 3rd Symposium IMEKO TC 19 - Environmental Measurements, "Instrumentation for the Information and Communication Technology Era", Kosice, Slovakia, September 8 - 10, 2010;

5.5.3.35 2010 IEEE International Instrumentation and Measurement Technology Conference, May 2010, Austin, Texas, USA;

5.5.3.36 XIX IMEKO World Congress, September 2009, Lisbon, Portugal;

5.5.3.37 2009 IEEE International Instrumentation and Measurement Technology Conference, May 2009, Singapore;

5.5.3.38 2009 IEEE Workshop on Computational Intelligence in Virtual Environments, March-April 2009, Nashville, TN, USA;

5.5.3.39 International Conference on Metrology of Environmental, Food and Nutritional Measurements MEFNM 2008, September 2008, Budapest, Hungary;

5.5.3.40 2008 IEEE International Instrumentation and Measurement Technology Conference, May 2008, Victoria, Vancouver Island, British Columbia, Canada;

5.5.3.41 1st IMEKO TC19 Symposium, Iasi, Romania, September 2007;

5.5.3.42 Conftele 2007, May 2007, Peniche, Portugal;

5.5.3.43 IEEE Instrumentation and Measurement Technology Conference 2007, May 2007, Warsaw, Poland;

5.5.3.44 IEEE Sensors 2006, October 2006, Daegu, South Korea;

5.5.3.45 IMEKO XVIII World Congress, September 2006, Rio de Janeiro, Brazil;

5.5.3.46 IEEE Sensors 2005, October/November 2005, Irvine, CA, USA;

5.5.3.47 14th TC4 Symposium of IMEKO, September 2005, Gdynia, Poland;

5.5.3.48 IEEE Instrumentation and Measurement Technology Conference 2005, May 2005, Ottawa, Canada;

5.5.3.49 Conftele 2005, April 2005, Tomar, Portugal;

5.5.3.50 IEEE Sensors 2004, October 2004, Wien, Austria;

5.5.3.51 IEEE Sensors 2003, October 2003, Toronto, Canada;

5.5.3.52 Eurosensors XVII, September 2003, Guimarães, Portugal;

5.5.3.53 XVII IMEKO World Congress, June 2003, Dubrovnik, Croatia;

5.5.3.54 Conftele 2003, June 2003, Aveiro, Portugal;

5.5.3.55 The First IEEE International Conference on Sensors, IEEE Sensors 2002, June 2002, Orlando, Florida, USA;

5.5.3.56 Conferência Científica Tecnologia de Engenharia - O Saber do Passado, O Desafio do Futuro - (CCTE 2002), May 2002, Lisbon, Portugal;

5.5.3.57 11th International Symposium on Trends in Electrical Measurements and Instrumentation and the 6th Workshop on ADC Modelling and Testing, IMEKO TC-4, September 2001, Lisbon, Portugal;

5.5.3.58 5th International Workshop on "ADC Modelling and Testing", IWADC'2000, September 2000, Wien, Austria;

5.5.4 Projects/Institutions

5.5.4.1 Project Peer Reviewer of the Science Fund of the Republic of Serbia, 2020-2022;

5.5.4.2 Member of the Expert Panel: Engineering and Technology (Panel E), in the ‘Research Assessment Exercise in Latvia’, October-November 2020;

5.5.4.3 IT internal projects evaluation, 2019:

DeToxSTM - Denoise Toolbox for Scanning Tunnelling Microscopy Images (FCT – 60 000€)

QuNet - Quantum Telecommunication Networks (IT – 58 400€)

RAPID - RF IC Design Automation (IT – 60 000€)

uFlexBatt - Batteryless energy supply system based on flexible organic photovoltaic cells (IT – 52 420€)

5.5.4.4 Fundação para a Ciência e a Tecnologia (FCT), expert evaluator, 2016;

5.5.4.5 Expert for Horizon 2020 Advisory Groups, European Commission, 2013;

5.5.4.6 Evaluator, as an expert on Electrical Engineering, of the Strategic Project "Doctorate in Universities of Excellence – Research Assessment and Support for Scientific Publishing", coordinated by The Romanian National University Research Council and by the Executive Agency for Higher Education and Research Funding, Romania, September 2011;

5.5.4.7 European Commission External Expert for Evaluation and Assessment of Proposals and Projects in FP7, 2007 - 2013;

5.5.4.8 Agência de Inovação (AdI), SA, independent expert, since November 2003;

5.5.4.9 European Commission External Expert for Evaluation and Assessment of Proposals and Projects in FP5 RTD Programmes, 1998 - 2002;

6. AUDITS AND SERVICES TO THE SCIENTIFIC AND INDUSTRIAL COMUNITIES

6.1 Quality audits of calibration and testing laboratories for the Instituto Português da Qualidade

- CPR-Marconi laboratories, July 1990, May 1994, December 1995, November 1996, September 1997, and September 1998;
- Laboratório Industrial da Qualidade (LIQ) laboratories, March 1995, May 1996, June 1997, May 1998, June 1999, and December 1999;
- Instituto Electrotécnico Português (IEP) laboratories, November 1995, December 1996, December 1997, October 1998, November 1999, November 2000, January 2005, and January 2006;

- Instituto das Comunicações de Portugal Radioelectric Metrology Laboratory, December 1997, and March 1999;
- LABELEC tests laboratory, September 1998, September 1999, September 2000, and November 2001;
- Portugal Telecom Inovação laboratories, February 2001, and December 2004;
- LABELEC Equipment for Work under Voltage Test Laboratory (LETET), April 2003, and July 2004;
- Siemens High-Voltage Laboratory, June 2004.

6.2 Member of the jury of Apoio a Atividades dos Docentes, Investigadores e Pessoal não Docente da UTL, 2012 and 2013.

6.3 Member of the jury of Prémio de Excelência – Sistema Português da Qualidade (PEX-SPQ), 2013.

6.4 Member of the jury of Prémio Inovação Jovem Engenheiro 2010, Ordem dos Engenheiros, June 2011.

6.5 Consultant of Centro Hospitalar de Lisboa Oeste (C.H.L.O.) for acquisition and maintenance of medical equipment of the hospitals of the C.H.L.O. (S. Fancisco Xavier, Egas Moniz e Santa Cruz), 2007-2008.

6.6 Reviewer of the report of European project DYNAD, November 1999 and February 2001.

6.7 Reviewer of IEEE 1241, "Standard for Terminology and Test Methods for Analog-to-Digital Converters" as a member of IMEKO TC-4 Working Group on A/D and D/A Converter Metrology - Project EUPAS, March 1999.

6.8 Consultant of PEDIP II for funding of electromagnetic compatibility testing structures, in 1996.

6.9 MPS EF3 flux meter testing, June 1995, commissioned by Sistel.

6.10 Consultant for Instituto Português da Qualidade in the acquisition of an immunity to radiated electromagnetic fields testing system, International Public Tender Nº8/IPQ/94-.

6.11 Expert for European Union Contest for Young Scientists, September 1994 and 1996.

6.12 Design and implementation of stand-alone personal computer based system for the automation of pavement deformation measurement using a Benkelman beam, 1992/93, commissioned by Prof. Paulo Pereira (Universidade do Minho).

6.13 Measurement of the electric resistivity of rubber-cork samples, June 1992, commissioned by Soberana Corticeira.

6.14 Measurement of the dielectric constant of cork agglomerate, July 1990, commissioned by CTCOR-Centro Tecnológico da Cortiça.

6.15 Evaluation of the anti-static characteristics of STATCONTROL using TECHNOTREND SRM 30 and MEGGER instruments, January 1990, commissioned by Inacqua Limitada. Industria Química.

6.16 Design and implementation of an interface between a COMARK 6800 digital thermometer and a PANASONIC KP-1081 printer, September 1989, commissioned by Professor Fátima Farelo, DEQ/IST.

6.17 Measurement of the resistance of insulators Pegulan-Artos and Vinilete-Endutex according to standard DIN 51953 for the Portuguese national archive of Torre do Tombo, June 1989, commissioned by Eng. Almeida d'Eça.

6.18 Measurement of the resistivity of samples of conductive alloys, December 1989, commissioned by Doctor Mário Ferreira.

6.19 Support to Eng. Augusto Gomes (DEC/IST) in "Ensaio Experimental de um Pilar sob Acções Alternadas", Relatório CMEST EP26/89 and later in his PhD. experimental work.

6.20 Member of the Direcção Geral do Ensino Superior - Ministério da Educação – that evaluated the acquisition of equipment for the installation of Institutos Politécnicos de Faro and Setúbal laboratories.

6.21 Member of the Direcção Geral do Ensino Superior - Ministério da Educação – Commission that evaluated World Bank funded Instituto Superior Técnico re-equipment.

7. COOPERATION WITH OTHER SCHOOLS, NAMELY FROM PORTUGUESE SPEAKING COUNTRIES

7.1 Visiting Professor, L.N. Gumilyov Eurasian National University, Nur-Sultan, Kazakhstan, September-December 2020. Courses lectured: Lean Production and Quality Control of Goods and Services for students of the BSc. program 6B07532 - "Standardization and Certification".

7.2 Collaboration with Centro de Electrónica Industrial da Universidade Eduardo Mondlane, Agreement ICCTI/UEM (Project 423 UEM).

7.3 Design of programs for training activities, República Popular de Angola, May 1995:

- Curso de Actualização em Sistemas de Medição Automatizada: Normas para Comunicação entre Sistemas;
- Curso de Actualização em Qualidade: Qualidade e Normas;
- Curso de Formação em Medidas em Radiofrequência;
- Curso Técnico de Actualização em Sensores, Transdutores e Actuadores Industriais;
- Curso Técnico de Actualização para Técnicos de Laboratório: Manutenção de Equipamento Electrónico;
- Curso Técnico de Actualização em Sistemas de Medida Automatizada: Instrumentação Suportada em Computadores Pessoais;
- Seminário: Compatibilidade Electromagnética.

7.4 Preparation of a proposal/project for BSc. in Electrotecnical and Mechanics, 1992, Instituto Superior de Tecnologia (ISTec), Cape Verde.

7.5 Collaboration, since 1992, with Departamento de Engenharia Electrotecnica da Universidade Eduardo Mondlane - Maputo, Mozambique – namely in the training of Electrical Measurements teaching staff.

7.6 Collaboration, since 1990, with Departamento de Engenharia Electrotécnica da Universidade Agostinho Neto - Luanda, Angola - namely in the training of Electrical Measurements teaching staff.

7.7 Design of the programs, bibliography and laboratories for Instrumentation and Measurements I e II and Circuit Analysis, Faculdade de Engenharia da Universidade da Ásia Oriental - Macau -, in 1989.

8. MANAGEMENT POSITIONS, AFFILIATIONS, AND DISTINCTIONS

8.1 Current

8.1.1 World Top 2% Scientists (Career Impact) (1960-2022), Stanford University, https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/4

8.1.2 Fellow of The Institution of Engineering and Technology (IET), since July 2018;

8.1.3 Member of the Fórum da Qualidade, since its foundation in July 2018;

8.1.4 Chief Advisor of the International Association for Promotion of Healthcare and Life-Science Research (IAPHLSR), since June 2017;

8.1.5 Member of the Executive Council of the Asian Society for Research in Engineering Sciences (ASRES), since March 2017;

8.1.6 IEEE Instrumentation and Measurement Society. Certificate of Appreciation as TC-15 Virtual Systems in Measurement member. February 2017;

8.1.7 Co-Chair IEEE Instrumentation and Measurement Portugal Chapter, since January 2016;

8.1.8 Advisory Board Member, IMEKO, since September 2012;

8.1.9 Doctor Honoris Causa, Faculty of Electrical Engineering, Technical University "Gheorghe Asachi", Iasi, Romania, since April 2009;

8.1.10 Member of IEEE Instrumentation and Measurement Society TC25 Medical and Biological Measurements - Subcommittee on Blood Pressure Measurement, since July 2008;

8.1.11 IMEKO Technical Committee on Environmental Measurement (TC-19) Honorary Chairman;

8.1.12 President of Maria Inês de Menezes Vaz de Sampaio Foundation, (http://www.fundacaomimvs.lx.it.pt/entrada/index.htm), since 2010;

8.1.13 Instituto de Telecomunicações:

- Instrumentation and Measurements Group Coordinator, since October 2000;
- Research Groups Coordinating Commission member;

8.1.14 Founding Member (2017) and President of the General Assembly of Sociedade

Portuguesa de Instrumentação Médica (SPInstrumédica), since May 2017;

8.1.15 Founding Member (2002), Vice-president (2006-2019) and President of the General Assembly (2019-) of Sociedade Portuguesa de Metrologia (SPMet);

8.1.16 Member of Sociedade Brasileira de Metrologia (SBM), since 2001;

8.1.17 IEEE - Institute of Electrical and Electronics Engineers - Senior Member, since January 2001;

8.1.18 IMEKO Technical Committee on Education and Training in Measurement and Instrumentation (TC-1) Member, since December 2000;

8.1.19 Member of Ordem dos Engenheiros, since 1983; Senior Member (2012); Conselheiro (2012).

8.2 Past

8.2.1 Coordinator of the BSc. on Electronics, IST, from September 2016 to March 2022;

8.2.2 President of ADIST - Associação para o Desenvolvimento do IST (Association for the Development of Instituto Superior Técnico) Fiscal Board, from March 2016 to March 2022;

8.2.3 Coordinator of the Electronics Scientific Area, DEEC/IST, September 2016 to September 2020;

8.2.4 Basic Sciences and Enabling Technologies Scientific Area Coordinator (with Prof. Luís Alcácer/Prof. Jorge Morgado), from November 2005 to November 2020;

8.2.5 IEEE Instrumentation and Measurement Society Distinguished Lecturer, 2015-2018;

8.2.6 Member of IST/UL School Assembly, from 2012 to March 2022;

8.2.7 Member of the Safety Commission of the Portuguese Research Reactor, from June 2012 to its extinguish in 2017;

8.2.8 Member of the General Assembly of IST-ID representing ADIST, March 2011 to March 2016;

8.2.9 Member of the Admission and Qualification Council of the Ordem dos Engenheiros, from February 2010 to April 2016;

8.2.10 Member of the Direction and of the General Assembly of ADIST - Associação para o Desenvolvimento do IST (Association for the Development of Instituto Superior Técnico), representing the IST, from July 2009 to March 2016;

8.2.11 Member of the Advisory Board of QSCB – Quality Systems Certification Bureau – Certificação de Sistemas ISO, Lda, October 2003 –January 2016;

8.2.12 Member of the Executive Committee (Procurement and Contracts Committee, later) of Fusion for Energy, from June 2009 to December 2013;

8.2.13 Vice-president of ADIST - Associação para o Desenvolvimento do IST (Association for the Development of Instituo Superior Técnico), from May 2008 to July 2009;

8.2.14 Vice-president of CPIN – Centro Promotor de Inovação e Negócios (Centre for Innovation and Businesses Promotion), from July 2008 until its extinction in 2014;

8.2.15 Member of FUNDEC – Associação para a Formação e o Desenvolvimento em Engenharia Civil e Arquitectura (Association for Training and Development in Civil Engineering and Architecture) Fiscal Board, from February 2008 to July 2009;

8.2.16 Member of the General Council of INESC-ID Lisboa – Instituto de Engenharia de Sistemas e Computadores Investigação e Desenvolvimento (Institute of Systems and Computer Engineering Research and Development), from February 2008 to July 2009;

8.2.17 Member of ISR – Instituto de Sistemas e Robótica (Institute for Systems and Robotics) Fiscal Board, from 2006 to 2009;

8.2.18 IMEKO Vice-president, in charge of XIX IMEKO World Congress organization, October 2006 to September 2009;

8.2.19 IEC TC 85 WG 16 member, from September 2001 to September 2004;

8.2.20 Portuguese Delegate to the Standards, Measurements and Testing Program of the 4th EC Framework Program, from 1994 to 1998;

8.2.21 <u>Instituto Superior Técnico (IST):</u>

- President for Administrative Affairs of Instituto Superior Técnico, from

February 2008 to July 2009;

- Member of the Management Commission of the Integrated MSc. Degree in Biomedical Engineering, IST, from November 2004 to 2008;
- Senator of the Scientific Council, June 1993 to October 1998 and from 2001 to 2003;
- Member of the Coordinating Commission of the Scientific Council, from January 2003 to October 2004;
- Member of the Coordinating Commission of the Pedagogical Council, February 1996 to October 1998;
- Effective Member of Assembleia de Representantes in 1979;

8.2.22 Department of Electrical and Computer Engineering/IST:

- Dean of the Department of Electrical and Computer Engineering, Instituto Superior Técnico, Technical University of Lisbon (UTL), from April 2010 to January 2013;
- Coordinator of Post-Graduation in Electrical and Computer Engineering/IST, from October 2006 to 2008;
- Deputy Dean for Research and Development, January 2003 to August 2004;
- Elected Member of Research and Development Council, October 2000 until its extinction in December 2004;
- Licenciatura in Electrical and Computer Engineering Self-Assessment Commission, July 2000 to March 2001;
- Coordinator of Licenciatura em Engenharia Electrotécnica e de Computadores/IST, February 1996 to October 1998;
- Master Degree in Electrical and Computer Engineering Coordinator, July to November 1991;
- Member of the Executive Commission, October 1990 to October 1992;
- Master Degree Scientific Commission Member, Coordinator of the

Instrumentation and Measurements Branch, June 1988 to October 1992;

8.2.23 Section of Electrotecnia Teórica e Medidas Eléctricas:

- Coordinator, October 1988 to October 1990;
- Member of the Directive Board, since 1976 until the extinction of the Section in 2004;

8.2.24 New Engineering Courses Design and Installation:

- Founder of specialization in Instrumentation and Electrical Measurements in the Master Degree Program in Electrical Engineering, 1988;
- Member of Licenciatura in Biomolecular and Nanosystems Engineering Design and Installation Commission, 2003/2004;
- Member of Comissão Curricular (Design and Installation Commission) of Licenciatura in Electronics Engineering, 2001/02;
- Member of the Coordinating Commission of Licenciatura in Engineering and Industrial Management, February to October 1991;
- Membro da Comissão Curricular (Design and Installation Commission) of Licenciatura in Engineering of the Environment, 1991/92;
- Membro da Comissão Curricular (Design and Installation Commission) of Licenciatura in Engineering and Industrial Management (LEGI/IST), Coordinator of the Global Management Branch, 1989/90);

8.2.25 Instituto da Energia – INTERG- Executive Director, from 1990 to 1998;

8.2.26 RELACRE's IMEKO Committee Member, since October 1997 to its extinction in 2002;

8.2.27 Representative, since January 1993, of Instituto Superior Técnico in the Sectoral Commission for Electrotechnics CS-01 of National Council for Quality. Vice-president since May 1999 to its extinction.

9. PUBLICATIONS

9.1 Papers Published and Submitted for Publication to Peer-reviewed Journals

International Publications

9.1.1 J.L. Correia da Mata, J.M.N.A. Fareleira, P.M.B.S. Girão, and W.A. Wakeham "Vibrating-Wire Techniques: Part 1: The Measurement of Viscosity". International Journal of Thermophysics. Submitted for publication.

9.1.2 Vítor Viegas, J. M. Dias Pereira, Pedro Girão, Octavian Postolache "Study of latencies in ThingSpeak", Advances in Science, Technology and Engineering Systems Journal, Vol. 6, No. 1, pp. 342-348, 2021.

9.1.3 Aimé Lay-Ekuakille, Ivana Durickovic, Anna Lucia Lanzolla, Rosario Morello, Claudio De Capua, Pedro S. Girão, Octavian Postolache, Alessandro Massaro, Leo Van Biesen "Effluents, Surface and Subterranean Waters Monitoring: Review and Advances". Measurement: Journal of the International Measurement Confederation, Vol. 137, No. 1, pp. 566 - 579, April, 2019.

9.1.4 Vítor Viegas, José Miguel Dias Pereira, Octavian Postolache, Pedro Silva Girão "Application of force and inertial sensors to monitor gait on legacy walkers", Acta IMEKO Vol 7, No 4, pp. 33-41, December, 2018.

9.1.5 P. Ferreira, F. O. Oliveira, R. Parafita, P.M. Girão, P.L. Correia, D.C. Costa "Patient-specific gamma-index analysis to evaluate 99mTc-MAA as a predictor for 90Y glass microspheres liver radioembolization dosimetry", Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization, pp. 1 - 7, August, 2018.

9.1.6 V. Viegas, J. M. Dias Pereira, O. Postolache, P.M. Girão "Monitoring Walker Assistive Devices: A Novel Approach Based on Load Cells and Optical Distance Measurements", MDPI Sensors, Vol. 18, No. 2, pp. 540 -

540, February, 2018.

9.1.7 V. Viegas, O. A. Postolache, P.M.B.S. Girão, J.M. Dias Pereira
"Quimera: The easy way to simulate Foundation Fieldbus applications", Computer Applications in Engineering Education, Vol. 24, Issue 6, pp. 914-925, November, 2016.

9.1.8 Paulo Ferreira, Rui Parafita, Ana Canudo, Carla Oliveira, Luís Rosa, Pedro Girão, Durval C. Costa
"Optimization of activity and absorbed doses calculation to target/tumor and normal liver volumes in patients submitted to yttrium-90 radioembolization with glass microspheres", Physica Medica: European Journal of Medical Physics, Volume 32, Supplement 3, September, 2016.

9.1.9 Paulo Ferreira, Rui Parafita, Ana Canudo, Carla Oliveira, Luís Rosa, Pedro Girão, Durval C. Costa
"Multiple Liver Metastases from Carcinoma of the Thymus Treated with Yttrium-90 Radioembolization (Glass Microspheres): Clinical Dosimetry and Outcome", Clinics in Oncology, Vol. 1, No. 1024, pp. 1 - 5, June, 2016.

9.1.10 P.M. Ramos, F.M. Janeiro, P.M. Girão
"Uncertainty evaluation of multivariate quantities: A case study on electrical impedance", Measurement, Vol. 78, No. 1, pp. 397 - 411, January 2016.

9.1.11 R. Queirós, F.C. Alegria, P.S. Girão, A.C. Serra
"A multi-frequency method for ultrasonic ranging", ULTRASONICS, Volume: 63, pp. 86-93, December, 2015.

9.1.12 O. Postolache, J.M. Dias Pereira, V. Viegas, L.P. Pedro, P.M. Girão, R.O. Oliveira, G. Postolache
"Smart Walker Solutions for Physical Rehabilitation", IEEE Instrumentation and Measurement Magazine, Vol. 18, No. 5, pp. 21 - 30, October 2015.

9.1.13 J.M.D. Pereira, O. Postolache, P.S. Girão
"Using neural network techniques in environmental sensing and measurement systems to compensate for the effects of influence quantities", IEEE

Instrumentation & Measurement Magazine, pp. 26 – 56, December 2014.

9.1.14 Octavian Postolache, José Dias Pereira, Pedro Silva Girão
"Wireless sensor network-based solution for environmental monitoring: water quality assessment case study", IET Science, Measurement and Technology, pp. 1-7, June 2014.

9.1.15 M.L. Martínez, F.X. Martinez-Farré, O. Casas; M. Quilez; G. Hornero, P.M. Ramos, B. Borges, H.S. Marques, P.M. Girão, et. al.
"Intelligent composting assisted by a wireless sensing network", Waste Management, Vol. 34, No. TBD, pp. TBD - TBD, April, 2014.

9.1.16 Oscar Casas, Marga López, Marco Quilez, Xavier Martinez-Farré, Gemma Hornero, Carlos Rovira, Mirta R. Pinilla, Pedro M. Ramos, Beatriz Borges, Hugo Marques, Pedro Silva Girão
"Wireless Sensor Network for Smart Composting Monitoring and Control", Measurement, Vol. 47, No. 1, pp. 483 - 495, January, 2014.

9.1.17 J.M. Dias Pereira, Vítor Viegas, Octavian Postolache, Pedro Silva Girão
"A Smart and Distributed Measurement System to Acquire and Analyze Mechanical Motion Parameters", Metrology and Measurement Systems, Vol. XX (2013), No. 3, pp. 465-478.

9.1.18 E.C. Pinheiro, O. Postolache, P.M. Girão
"Contactless Impedance Cardiography Using Embedded Sensors", Measurement Science Review, Vol. 9, No. 3, pp. 157-164, June, 2013.

9.1.19 O. Postolache, P.M. Girão, G. Postolache
"Method for Unobtrusive Measurement of Indoor Air Effects on the Cardio-Respiratory Function", Environmental Engineering and Management Journal, Vol. 12, No. 6, pp. 1239 - 1254, June, 2013.

9.1.20 Pedro Silva Girão, Pedro Miguel Pinto Ramos, Octavian Postolache, José Miguel Dias Pereira
"Tactile Sensors for Robotic Applications", Measurement, Vol. 46, Issue 3, pp. 1257–1271, May 2013.

9.1.21 E.C. Pinheiro, O. Postolache, P.M. Girão
"Study on ballistocardiogram acquisition in a moving wheelchair with embedded sensors", Metrology and Measurement Systems, Vol. XIX (2012), No. 4, pp. 739-750.

9.1.22 J.M. Dias Pereira, O. Postolache, and P. Silva Girão
"Heavy Metals Measurement: A Suitable Solution to Improve Online Measurement Celerity", Instrumentation Science and Technology, Vol. 40, Issue 4, pp. 355-371, June, 2012.

9.1.23 José Miguel Dias Pereira, Octavian Postolache, Pedro Silva Girão
"Using a Segmented Voltage Sweep Mode and a Gaussian Curve Fitting Method to Improve Heavy Metal Measurement System Performance", Metrology and Measurement Systems, Vol. XIX (2012), No. 2, pp. 381-394.

9.1.24 E. Pinheiro, O. Postolache, P. Girão
"Empirical Mode Decomposition and Principal Component Analysis implementation in processing non-invasive cardiovascular signals", Measurement, Vol. 45, Issue 2, pp. 175-181, February 2012.

9.1.25 O. Postolache, P.M. Girão, G. Postolache
"Seismocardiogram and Ballistocardiogram Sensing", International Journal of Measurement Technologies and Instrumentation Engineering (IJMTIE), Vol. 1, No. 3, pp. 67 - 88, December, 2011.

9.1.26 Miguel Dias Pereira, Octavian Postolache, Pedro Silva Girão
"A Smart Measurement and Stimulation System to Analyze and Promote Non-Nutritive Sucking of Premature Babies", Measurement Science Review, Vol. 11, No. 6, pp. 173-180, October 2011.

9.1.27 O. Postolache, P.M. Girão, J.M. Dias Pereira, G. Postolache
"FM-CW radar sensors for vital signs and motor activity monitoring", ICST Trans. on Ambient Systems, Vol. 11, Issues 10-12, pp. 1-10, October-December, 2011.

9.1.28 O. Postolache, J.M. Dias Pereira, P.M. Girão

"Multi-sensing node architecture for water quality monitoring", Instrumentation Viewpoint, No. 11, pp. 66 - 67, September, 2011.

9.1.29 E.C. Pinheiro, O. Postolache, P.M. Girão
"A Survey on Unobtrusive Measurements of the Cardiovascular Function and their Practical Implementation in Wheelchairs", Sensors & Transducers Magazine, Vol. 9, No. 12, pp. 182 - 199, December, 2010.

9.1.30 R. Queirós, F. Alegria, P.M. Girão, A.C. Serra
"Cross-Correlation and Sine-Fitting Techniques for High Resolution Ultrasonic Ranging", IEEE Transactions on Instrumentation and Measurement, Vol. 59, No. 12, pp. 3227 - 3236, December, 2010.

9.1.31 E.C. Pinheiro, O. Postolache, P.M. Girão
"Non-Intrusive Device for Real-Time Circulatory System Assessment with Advanced Signal Processing Capabilities", Measurement Science Review, Vol. 10, No. 5, pp. 166 - 175, October, 2010.

9.1.32 O. Postolache, P.M. Girão, J. Mendes, E.C. Pinheiro, G. Postolache
"Physiological Parameters Measurement Based on Wheelchair Embedded Sensors and Advanced Signal Processing", IEEE Transactions on Instrumentation and Measurement, Vol. 59, No. 10, pp. 2564 - 2574, October 2010.

9.1.33 E.C. Pinheiro, O. Postolache, P.M. Girão
"Theory and Developments in an Unobtrusive Cardiovascular System Representation: Ballistocardiography", The Open Biomedical Engineering Journal, Vol. 4, No. 1, pp. 201 - 216, October 2010.

9.1.34 E.C. Pinheiro, O. Postolache, P.M. Girão
"Implementation of Compressed Sensing in Telecardiology Sensor Networks", International Journal of Telemedicine and Applications, Vol. 2010, No. 1, pp. 1 - 12, September 2010.

9.1.35 E.C. Pinheiro, O. Postolache, P.M. Girão
"Fixed-point implementation of infinite impulse response notch filters", Metrology and Measurement Systems, Vol. XVII, No. 2, pp. 217 - 232, June 2010.

9.1.36 J.M. Dias Pereira, O. Postolache, P.M. Girão

"Spread Spectrum Techniques in Wireless Communication", IEEE Instrumentation and Measurement Magazine, Vol. 12, No. 6, pp. 21 - 24, December 2009.

Invited paper.

9.1.37 J.M. Dias Pereira, O. Postolache, P.M. Girão

"PDF-based Progressive Polynomial Calibration Method for Smart Sensors Linearization", IEEE Transactions on Instrumentation and Measurement, Vol. 58, No. 9, pp. 3245 - 3252, September 2009.

Invited paper.

9.1.38 O. Postolache, J.M. Dias Pereira, P.M. Girão

"Smart Sensors Network for Air Quality Monitoring Applications", IEEE Transactions on Instrumentation and Measurement, Vol. 58, No. 9, pp. 3253 - 3261, September 2009.

9.1.39 G. Postolache, O. Postolache, P.M. Girão

"HRV and BPV neural network model with wavelet based algorithm calibration", Measurement, Vol. 42, No. 6, pp. 805 - 814, July 2009.

9.1.40 O. Postolache, P.M. Girão, A.A. Anand, P.S. Sinha, G. Postolache

"Health status and air quality parameters monitoring based on mobile technology and WPAN", International Journal Advanced Media and Communication, Vol. 3, No. 1/2, pp. 139 - 153, April 2009.

9.1.41 V. Viegas, J.M. Dias Pereira, P.M. Girão

"A Brief Tutorial on the IEEE 1451.1", IEEE Instrumentation and Measurement Magazine, Vol. 11, No. 2, pp. 38 - 46, April 2008.

Invited paper.

9.1.42 H.G. Ramos, L.M. Gurriana, O. Postolache, J.M. Dias Pereira, P.M. Girão

"Development and Characterization of a Conductivity Cell for Water Quality Monitoring", Transactions on Systems, Signals and Devices, Vol. 3, No. 4, pp. 483 - 498, April 2008.

9.1.43 O. Postolache, P. Girão, M. Pereira, Helena Ramos
"Intelligent Processing of the Dynamic Response of Sensors for Water Quality Monitoring", Transactions on Systems, Signals and Devices, Issue on Sensors, Circuits & Instrumentation Systems, Vol.3, No. 4, pp. 539-550, April 2008.

9.1.44 Vítor Viegas, J.M. Dias Pereira, P.M.B. Silva Girão
".NET Framework and Web Services: A Profit Combination to Implement and Enhance the IEEE 1451.1 Standard", IEEE Transactions on Instrumentation and Measurement, Vol. 56, n. 6, pp. 2739-2747, December 2007.

9.1.45 O. Postolache, P.S. Girão, J.M. Dias Pereira, Helena Ramos
"Multi-Beam Optical System and Neural Processing for Turbidity Measurement", IEEE Sensors Journal, Vol. 7, No. 5, pp. 679-684, May 2007.

9.1.46 J. Dias Pereira, O. Postolache, P. Silva Girão
"Wavelet Techniques: A Suitable Tool to Characterise and Optimize Encoders' Based Systems", Measurement, Elsevier Science B. V., vol. 40, n. 3, pp. 264-271, April 2007.

9.1.47 J.M. Dias Pereira, O. Postolache, P.M.B. Silva Girão
"A Digitally Programmable A/D Converter for Smart Sensors Applications", IEEE Transactions on Instrumentation and Measurement, Vol. 56, n. 1, pp. 158-163, February 2007.

9.1.48 O. Postolache, J.M. Dias Pereira, P. Silva Girão, C. Banha, H. Ramos
"Dew Point and Relative Humidity Smart Measuring System", IEEE Transactions on Instrumentation and Measurement, Vol. 55, n. 6, pp. 2259-2264, December 2006.

9.1.49 J.M. Dias Pereira, O. Postolache, P. Silva Girão
"Using a Dual-Channel FDC Device and ANN Techniques to Improve Measurements Accuracy", Sensors & Transducers Journal, ISSN 1726-5479, Vol. 62, Issue 12, pp. 462-472, December 2005.

9.1.50 O.A. Postolache, P.M.B.S. Girão, J.M.D. Pereira, H.M.G. Ramos
"Self-Organizing Maps Application in a Remote Water Quality Monitoring

System", IEEE Transactions on Instrumentation and Measurement, Vol. 54, n. 1, pp. 322-329, February 2005.

9.1.51 J.M. Dias Pereira, Octavian Postolache, P. Silva Girão
"HART Protocol Analyser Based in LabVIEW", International Journal of Computing (ISSN 1727-6209), Vol. 3, Issue 2, pp. 39-42, September 2004.
Invited paper.

9.1.52 Helena Ramos, M. Pereira, V. Viegas, O. Postolache, P. Girão
"A Virtual Instrument to Test Smart Transducer Interface Modules (STIMs)", IEEE Transactions on Instrumentation and Measurement, Vol. 53, n. 4, pp. 1232-1239, August 2004.

9.1.53 Francisco Alegria, Pedro Girão, Vladimir Haasz, António Serra
"Performance of Data Acquisition Systems from the User's Point of View", IEEE Transactions on Instrumentation and Measurement, Vol. 53, n. 4, pp. 907-914, August 2004.

9.1.54 J.M. Dias Pereira, P.M.B. Silva Girão, A. Cruz Serra
"An FFT-Based Method to Evaluate and Compensate Gain and Offset Errors of Interleaved ADC Systems", IEEE Transactions on Instrumentation and Measurement, Vol. 53, No. 2, pp. 423-430, April 2004.

9.1.55 Pedro Girão, Octavian Postolache, Miguel Pereira, Helena Ramos
"Distributed Measurement Systems and Intelligent Processing for Water Quality Assessment", Sensors & Transducers Journal, ISSN 1726-5479, Vol. 38, Issue 12, pp. 82-93, December 2003.

9.1.56 J.M. Dias Pereira, O. Postolache, P. Silva Girão
"Colored Light-to-Voltage Converters Based Absorbance Meter", International Scientific Journal of Computing, Vol. 2, Issue 1, pp. 58-64, July 2003.
Invited paper.

9.1.57 O. Postolache, J.M. Dias Pereira, P. Silva Girão, Helena Ramos
"Increasing Ion Selective Electrode Performance Using Neural Networks", International Scientific Journal of Computing, Vol. 2, Issue 1, pp. 17-24, July

2003.

Invited paper.

9.1.58 Octavian Postolache, Miguel Dias Pereira, Pedro Silva Girão, Cristina Temneanu "Neural Networks and Fuzzy Models Applications on Water Quality Monitoring Systems", International Scientific Journal of Optoelectronic Information-Power Technologies", n.2 (4), pp. 159-170, 2002.

9.1.59 J. Dias Pereira, P. Silva Girão, A. Cruz Serra
"Dithering Performance of Oversampled ADC Systems Affected by Hysteresis", Measurement, Elsevier Science B. V., vol. 32, n. 1, pp. 51-59, July 2002.

9.1.60 P.M.B. Silva Girão, O.A. Postolache, J.A. Brandão Faria, J.M.C. Dias Pereira
"An Overview and a Contribution to the Optical Measurement of Linear Displacement", IEEE Sensors Journal, Vol. 1, Issue 4, pp. 322-331, December 2001.

Invited paper.

9.1.61 J.M. Dias Pereira, P.M.B. Silva Girão and Octavian Postolache
"Fitting Transducer Characteristics to Measured Data", IEEE Instrumentation & Measurement Magazine, pp. 26-39, December 2001.

Invited paper.

9.1.62 J.M.D. Pereira, O. Postolache, P.M.B.S. Girão and M. Cretu
"Minimizing Temperature Drift Errors of Conditioning Circuits Using Artificial Neural Networks", IEEE Transactions on Instrumentation and Measurement, Vol. 49, Nº 5, pp. 1122-1127, October 2000.

9.1.63 J. Brandão Faria, Octavian Postolache, J. Dias Pereira and P. Silva Girão
"Automated Characterization of a Bifurcated Optical Fiber Bundle Displacement Sensor Taking into Account Reflector Tilting Effects", Microwave and Optical Technology Letters, Volume 26, Number 4, pp. 242-247, August 20, 2000.

9.1.64 J. Dias Pereira, O. Postolache, P.M. Silva Girão
"A Temperature Compensated System for Magnetic Field Measurement Based on Artificial Neural Networks", IEEE Transactions on Instrumentation and

Measurement, vol. 47, n. 2, pp. 494-498, April 1998.

9.1.65 H. Geirinhas Ramos, P. Silva Girão
"Experimental Validation of a Two Dimensional Vector Model of Ferromagnetic Hysteresis", pp. 540-543.
Studies in Applied Electromagnetics and Mechanics, 10 - Nonlinear Electromagnetic Systems - A. J. Moses and A. Basak (editors), IOS Press, 1996.
Invited paper.

9.1.66 H. Geirinhas Ramos, A. Lopes Ribeiro, P. Silva Girão
"A Two-dimensional Vector Model of Ferromagnetic Hysteresis", Journal of Magnetism and Magnetic Materials, Vol. 133, Nos 1-3, pp. 574-577, May 1994.

9.1.67 H. Geirinhas Ramos, P. Silva Girão
"Measurement of Low Level DC Magnetic Fields Using a Synchronous Demodulation Technique", IEEE Transactions on Instrumentation and Measurement, vol. 42, n.2, pp. 544-546, April 1993.

9.1.68 P.M.B. Silva Girão, J.F. Borges da Silva
"Analog Circuit Simulation of Magnetic Dipole Behavior According to the Langevin-Weiss Theory of Ferromagnetism", IEEE Transactions on Education, vol. 35, n. 2, pp. 153-158, May 1992.

9.1.69 H. Geirinhas Ramos, P. Silva Girão
"A Rotating Field Automated Measurement System for the Characterization of Ferromagnetic Materials", Journal of Applied Physics, vol. 69, n. 8, Part IIA, pp. 5103-5105, April 1991.

9.1.70 P.M.B. Silva Girão, J.F. Borges da Silva
"Automated Measurement System to Generate a Preisach Type Model of Ferromagnetic Hysteresis", IEEE Transactions on Instrumentation and Measurement, vol. IM-35, n.4, pp. 443-446, December 1986.

National or Regional Publications

9.1.71 Baikhozhaeva Bakhytkul Uzakovna, Pedro Manuel Brito da Silva Girão
"University Metrological Education: Opportunities and Challenges", Journal of Metrology, Kazakhstan, 2020.

9.1.72 Pedro Silva Girão, O. Postolache, G. Postolache, J.M. Dias Pereira
"Unobtrusive Solutions for Health Monitoring and Physiotherapy", Medições e Ensaios, nº 12, pp. 4-14, Janeiro 2016.
Invited paper

9.1.73 Eduardo Pinheiro, Octavian Postolache, Pedro Girão, César da Costa
"Identificação de Sistemas na Otimização do Controle de Nível em Regime Não Linear", Mecatrônica Atual, nº 50, pp. 2-8, Março-Abril 2011.

9.1.74 Pedro M. B. Silva Girão
"Contributions to *In-situ* Water Quality Monitoring", Buletinul Institutului Politehnic din Iasi, Sectia Electrotehnica, Energetica, Electronica, Tomul LVI (LX), Fasc. 4, pp. 9-19, 2010.
Invited paper.

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9.3.256 H. Geirinhas Ramos, P. Silva Girão

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9.3.257 J.A. Ferreira Lopes, J.O. Machado Vitorino, P.M.B. Silva Girão, J.M. Torres Pereira

"Implementação de um sistema automático de medida da condutividade de materiais semicondutores amorfos", Actas das 4ªs Jornadas Luso-Espanholas de Engenharia Electrotécnica, Volume 3, pp. 1483-1486, Porto, Portugal, Julho 1995.

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9.3.259 A. Cruz Serra and P. Silva Girão

"Static and Dynamic Testing of A/D Converters Using a VXI Based System",

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9.3.260 P. Silva Girão

"Characterization of Noise Generators: Automated Measuring System for the Determination of the Probability Distribution and Autocorrelation Functions", Conference Proceedings of 1994 IEEE Instrumentation and Measurement Technology Conference, Vol. 2, pp. 533-535, Hamamatsu, Japan, May 1994.

9.3.261 H.M. Geirinhas Ramos and P. Silva Girão

"Low Cost Audio Analog Vector Voltmeter/Wattmeter", Proceedings of IEEE 7th Mediterranean Electrotechnical Conference (MELECON´94), Volume 3, pp. 1201-1203, Antalya, Turkey, April 1994.

9.3.262 H. Geirinhas Ramos, A. Lopes Ribeiro, P. Silva Girão

"A Two Dimensional Vector Model of Ferromagnetic Hysteresis", Abstracts of SMM 11 Soft Magnetic Materials Conference, S6-16, Venezia, Italy, September/October 1993.

9.3.263 V.M. Esteves Antunes, P.M. Costa Nicolau, A. Cruz Serra, P. Silva Girão

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9.3.264 Pedro M. B. Silva Girão

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9.3.265 H. Geirinhas Ramos, P. Silva Girão

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9.3.266 H. Geirinhas Ramos, P. Silva Girão

"A Rotating Field Automated Measurement System for the Characterization of

Ferromagnetic Materials", IEEE 35th Annual Conference on Magnetism and Magnetic Materials, S. Diego, California, USA, November 1990.

9.3.267 H. Geirinhas Ramos, P. Silva Girão
"PC Based System for the Characterization of Ferromagnetic Materials", Actas das Jornadas Hispano Lusas de Ingeniería Eléctrica, Tomo III, pp. 1235-1244, Vigo, Espana, Julio 1990.

9.3.268 P.M.B. Silva Girão, J.F. Borges da Silva
"Automated Measurement System to Generate a Preisach Type Model of Ferromagnetic Hysteresis", Conference Record of the IMTC/86 IEEE Instrumentation and Measurement Technology Conference, pp. 207-211, Boulder, Colorado, USA, March 1986.

9.3.269 A. Santos Pascoal, M. Ventim Neves, P. Silva Girão
"Aplicação de um Microprocessador ao Controlo Digital em Tempo Real", Congresso da Ordem dos Engenheiros, Lisbon, Portugal, December 1981.

9.3.270 A.M. Santos Pascoal, M.F. Ventim Neves, P.M.B. Silva Girão
"A Microcomputer Based PID Controller", Proceedings of the 1981 Vigo Workshop on Signal Processing and its Applications, pp. C1/4/1 - C1/4/8, Vigo, Spain, July 1981.

9.4 Editions, Patents, and Standards

9.4.1 P.M. Girão, Octavian Postolache (editors)
*Smart Wearable Sensors and Systems for Healthcare Monitor*ing, Sensors, MDPI AG, Switzerland, 2022.

9.4.2 P.M. Girão, Octavian Postolache, Sergio Rapuano (editors)
Advanced Sensing Technologies for Environmental Monitoring Applications, Applied Sciences, MDPI AG, Switzerland, 2020.

9.4.3 P.M. Girão, Octavian Postolache, Edward Sazonov (editors)
Assistive Devices and Sensors, Sensors, MDPI AG, Switzerland, 2020.

9.4.4 P.M. Girão, G. Cannata, P.M. Ramos, P. Maiolino (Editors)
Tactile Sensors and Applications, Sensors, MDPI AG, Switzerland, 2018.

9.4.5 Seunghee Park, Aimé Lay-Ekuakille, Octavian Postolache, Pedro Silva Girão (Editors)
Intelligent Sensing Technologies for Nondestructive Evaluation, Sensors, MDPI AG, Switzerland, 2017.

9.4.6 Aimé Lay-Ekuakille and Pedro Silva Girão (Editors)
Environmental Measurement and Instrumentation, IET Science, Measurement and Technology, May, 2014.

9.4.7 Aimé Lay-Ekuakille and Pedro Silva Girão (Editors)
4th IMEKO TC19 Symposium on Environmental Instrumentation and Measurements, "Protecting Environment, Climate Changes and Pollution Control", June 3-4, 2013, Lecce, Italy.

9.4.8 Pedro Silva Girão, Pedro Miguel Ramos, Francisco Alegria (Editors)
Proceedings of the XIX IMEKO World Congress, Lisbon, Portugal, September 2009.

9.4.9 Octavian Postolache, Pedro Silva Girão, Gabriela Postolache
"Sistema e Processo para Optimização do Funcionamento do Equipamento e do Método de Desfibrilhação/Cardioversão para Sujeitos Humanos" (System and process for functioning optimization of defibrillation/cardioversion equipment and method for human subjects). Patent PT105456, December 2012.

9.4.10 Octavian Postolache, Pedro Silva Girão
"Módulo de identificação e aquisição de dados para transdutores com saída analógica em tensão ou corrente" (Module of Identification and Data Acquisition for Transducers with Analogue Voltage or Current Output). Patent 104735, November 2011.

9.4.11 Octavian Postolache, Pedro Silva Girão, Gabriela Postolache, Eduardo Pinheiro
"Unidade de Sistema Ubíquo para Cuidados Continuados de Saúde com Capacidades de Localização e Monitorização de Sinais Fisiológicos em Sujeitos

Humanos (Unit of System for Ubiquitous Continuous Healthcare with Location and Humans Physiological Signals Monitoring Capabilities). Patent PT104602, September 2011.

9.4.12 Pedro Silva Girão, Octavian Postolache, Gabriela Postolache
"Medidor de parâmetros fisiológicos baseado em sensores tipo auricular, arquitectura Bluetooth distribuída e em telemóveis" (Physiological parameter measuring system based on headset type sensors, Bluetooth distributed architecture and mobile phones). Patent PT104038, March 2010.

9.4.13 José Miguel Dias Pereira, Vítor Viegas, Carlos Banha, Pedro Silva Girão, Octavian Postolache, João Barreiros, Manuel Cunha
"Medidor de sucção não-nutritiva em prematuros" (Gauge for non-nutritive sucking of preterm infants). Patent PT103979, February 2010.

9.4.14 Pedro Silva Girão, Octavian Postolache, José Miguel Dias Pereira, Helena Geirinhas Ramos
"Sistema automático e distribuído de medição de parâmetros da qualidade da água" (Distributed Automated Water Quality Parameters Measuring System). Patent PT103626, November 2007.

9.4.15 Pedro Silva Girão, Octavian Postolache, Gabriela Postolache
"Instrumento portátil móvel para medição dos parâmetros de homeostasia em seres humanos" (Mobile Portable Instrument for the Measurement of Human Homeostasis). Patent PT103683, October 2007.

9.4.16 Francisco Alegria, Pedro Silva Girão
"Sistema de identificação automática de matrículas de veículos a partir de imagens vídeo" (Video Image Based Vehicle Plate Recognition System). Patent PT103680, September 2007.

9.4.17 Pedro Silva Girão, Octavian Postolache, José Miguel Dias Pereira, Helena Geirinhas Ramos
"Medidor de turbidez para aplicações ambientais e industriais" (Turbiditimeter for Environmental and Industrial Applications). Patent PT103629, July 2007.

9.4.18 J. Viegas, P. Girão, F. Alegria, B. Lu, J. Vieira
"Sistema automático de detecção e identificação da intrusão de veículos em faixas ou sentidos de circulação interditados ao trânsito" (Automated System for Detection and Identification of the Intrusion of Vehicles on Closed Traffic Lanes), Patent PT103501, April 2007.

9.4.19 Pedro Silva Girão, Raul Carneiro Martins (Editors)
Sensors and Actuators – Monographs – Volume 2: 2004/2005.

9.4.20 Pedro Silva Girão, Raul Carneiro Martins (Editors)
Sensors and Actuators – Monographs – Volume 1: 2003/2004.

9.4.21 IEC TC85/WG 16: G. Capponi; H.-H. Albrecht, R.A. Belcher, G. Betta, D.W. Braudaway, P.S Girão, S. Haapamaki, V. Haasz, P. Packenbush, A.M. C. Serra, P.V. Reeth
IEC standard 62008 (85/231/CD), 2005, "Performance characteristics and calibration methods for digital data acquisition systems and relevant software".

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Proceedings of the 6th Euro Workshop on ADC Modelling and Testing, JAMP Lda., ISBN 972-98115-5-5, Legal Deposit 168084/01**,** Lisbon, Portugal, September 2001.

9.4.23 António Cruz Serra and Pedro Silva Girão (Editors)
Proceedings of the 11th IMEKO TC-4 Symposium "Trends in Electrical Measurement and Instrumentation", JAMP Lda., ISBN 972-98115-4-7, Legal Deposit 168083/01, Lisbon, Portugal, September 2001.

9.5 <u>Pedagogical-oriented Work</u>

9.5.1 Licenciatura

9.5.1.1 P.M.B. Silva Girão
Lean Production, BSc. program 6B07532 - "Standardization and Certification", L.N. Gumilyov Eurasian National University, Nur-Sultan, Kazakhstan, collection of slides, 2020.

9.5.1.2 P.M.B. Silva Girão

Quality Control of Goods and Services, BSc. program 6B07532 - "Standardization and Certification", L.N. Gumilyov Eurasian National University, Nur-Sultan, Kazakhstan, collection of slides, 2020.

9.5.1.3 P.M.B. Silva Girão

Introdução à Engenharia Eletrónica (Introduction to Electronics Engineering), collection of slides, 2021, 2020, 2019.

9.5.1.4 P.M.B. Silva Girão

Comunicação Oral e Escrita (Oral and Written Communication), collection of slides, 2013.

9.5.1.5 P.M.B. Silva Girão

Formação Livre II (Soft Skills II), collection of slides, 2013.

9.5.1.6 P.M.B. Silva Girão

Tecnologia e Medidas Eléctricas (Technology and Electrical Measurements), Escola Naval, 2005.

9.5.1.7 P.M.B. Silva Girão

Sensores e Actuadores (Sensors and Actuators) collection of slides, IST, 2003.

9.5.1.8 P.M.B. Silva Girão

Instrumentação e Medidas (Instrumentation and Measurements) – Chapters 1, 2 and 4, AEIST.

9.5.1.9 Laboratorial works for Instrumentação e Aquisição de Sinais (Instrumentation and Signal Acquisition), IST, 2004/2005 e 2005/2006 (*):

- Análise de Sinais no Domínio do Tempo e no Domínio da Frequência (Time and frequency domain signal analysis);
- Amplificação de Sinais Eléctricos. Interferência Electromagnética (Electrical signals amplification. Electromagnetic interference);

- Filtragem Analógica e Digital de Sinais Eléctricos (Analog and digital filtering of electrical signals);
- Circuitos com Parâmetros Concentrados: Medição de Impedância (Lumped parameters circuits: impedance measurement);
- Aquisição de Sinais (Signal acquisition);
- Introdução ao Equipamento de Medida Elementar de um Laboratório (Introduction to basic laboratorial instruments)**;**
- Medição de uma Impedância Utilizando Detecção Síncrona (lock-in amplifier) (Lock-in amplifier based impedance measurement);
- Análise Espectral. Analisador de Espectros Heterodino (Spectral analysis. Heterodyne spectrum analyser);
- Interferência e Susceptibilidade Electromagnética (Electromagnetic interference and susceptibility);
- Amplificação de Bio-sinais (Bio-signals amplification);
- Detecção e Condicionamento de Sinais Bioeléctricos (Electrocardiograma) (Detection and conditioning of bioelectric signals (electrocardiogram);
- Implementação da Função de Auto Configuração num Sistema de Aquisição e Visualização de Sinais (Implementation of the auto-run function in a signal acquisition and visualization system);
- Medição de uma Bioimpedância (Measurement of a bioimpedance);
- Aquisição e Processamento Digital de Sinais Biológicos (Acquisition and digital processing of biologic signals).

9.5.1.10 Sensores e Actuadores (Sensors and Actuators) evaluation mini-projects:

- Actuador hidráulico linear com ajuste de posição (Position controlled hydraulic linear actuator);
- Actuador hidráulico linear com ajuste de velocidade (Speed controlled hydraulic linear actuator);
- Actuador pneumático linear com ajuste de posição (Position controlled pneumatic linear actuator);

- Actuador pneumático linear com movimento linear periódico (Periodic linearly controlled pneumatic linear actuator);
- Balança com indicação digital (Digital balance);
- Sistema de posicionamento global (GPS);
- Controlo de posição angular utilizando um inclinómetro (Angular position control using an inclinometer);
- Medição da aceleração e velocidade angular utilizando um acelerómetro unidireccional (Angular acceleration and speed measurement using a unidirectional accelerometer);
- Transdução de deslocamento Inductosyn (Inductosyn displacement transducer);
- Caracterização de actuadores eléctricos (Electrical actuators characterization);
- Posicionador 2D utilizando actuadores eléctricos (2D positioner using electrical actuators);
- Transdutor de atitude utilizando giroscópios (Gyroscope-based attitude transducer);
- Transdutor ultrasónico de posição 2D (2D ultrasonic position transducer).

9.5.1.11 Medidas Eléctricas (Electrical Measurements) and Instrumentação e Medidas (Instrumentation and Measurements) laboratorial works, IST, 1975/01:

- Medição da resistência interna de um instrumento de quadro móvel pelo método de igual desvio (Measurement of the internal resistance of a moving-iron instrument using the equal deflexion method);
- Aferição de um wattímetro electrodinâmico (Calibration of an electrodynamic wattmeter);
- Voltímetros quadráticos e de valor médio (Quadratic and average responding voltmeters) (*);
- Utilização da oscilografia digital na análise do funcionamento duma

lâmpada fluorescente (Analysis of the operation of a fluorescent lamp using digital oscillography) (*);

- Sistema automático de medida para a obtenção da característica de um dínamo em vazio (Automated measuring system for the determination of the characteristic of an unloaded dynamo) (*);
- Amplificadores operacionais e de instrumentação (Operational and instrumentation amplifiers) (*);
- Calibração em corrente contínua de instrumentos de medida (DC calibration of measuring instruments) (*);
- Fontes de alimentação de tensão contínua (DC power supplies) (*);
- Malha de fase síncrona (Phase-locked loops);
- Contador universal de tempo/frequência (Universal time-frequency counter) (*);
- Sistema automático de medida para a obtenção das características Ic(Vce) de um transistor (Automated measuring system for transistor Ic(Vce) characteristic tracing) (*);
- Voltímetro digital (Digital voltmeter) (*);
- Osciloscópio digital (Digital oscilloscope) (*);
- Transdutores de medida (Measuring transducers).

9.5.1.12 Electrónica I (Electronics I) and Electrotecnia Teórica I e II (Theoretic Electrotechnics I and II) evaluation projects, IST, 1975/90:

- Desvio electrónico por campo magnético estático não uniforme (Electronic deflexion by static, non-uniform magnetic field);
- Elemento de memória de computador utilizando um núcleo de ferrite (Ferrite-based computer memory element);
- Circuito de desvio horizontal de um televisor (Television horizontal deflexion circuit) (*).

9.5.2 Master Degree

9.5.2.1 Formação Livre II (Soft Skills II), collection of slides, 2013.

9.5.2.2 Sensores e Actuadores Inteligentes (Smart Sensors and Actuators) collection of slides, IST, 2006.

9.5.2.3 Transdutores de Medida (Measuring Transducers) collection of slides, IST, 1996.

9.5.2.4 Sistemas Automáticos de Medida (Automated Measuring Systems) and Instrumentação Suportada em Computadores Pessoais (PC-based Instrumentation) collection of slides, IST, 1989.

9.5.2.5 Transdutores de Medida (Measuring Transducers) collection of slides, IST, 1988.

9.5.3 Professional Training

9.5.3.1 Instrumentação e Equipamento de Medida (Instrumentation and Measuring Equipment), 1996 (*).

9.5.3.2 Fundamentos de Medida e Instrumentação (Fundamentals of Measurement and Instrumentation), FUNDETEC, 1987 (*).

9.5.3.3 Instrumentação Laboratorial ((Laboratorial Instrumentation), FUNDETEC, 1987 (*).

9.5.3.4 Fundamentos de Instrumentação Laboratorial (Fundamentals of Laboratorial Instrumentation), IST/FSE, 1987 (*).

9.5.3.5 Instrumentação (Instrumentation), IST/FSE, 1986:

- Fundamentos da Instrumentação Digital (Digital Instrumentation Fundamentals);
- Multímetro Digital (Digital multimeter);
- Transmissão de Informação entre Sistemas (Transmission of information between systems);
- Oscilografia Digital (Digital oscillography).

(*) – In co-authorship