

Paula A Graça

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EDUCATION

- 2021–/ **PhD in Electrical and Computer Engineering**, *Faculty of Engineering of the University of Porto*, Porto, Portugal.
Focus on underwater acoustic localization, reconfigurable digital systems and signal processing.
GPA (curricular component): 18/20
- 2015–2020 **Integrated Masters in Electrical and Computer Engineering**, *Faculty of Engineering of the University of Porto*, Porto, Portugal).
Branch: Telecommunications, Electronics and Computers - Microelectronics and Signal Processing
GPA: 15/20
- 2018–2019 **ERASMUS+ Program**, *Technical University of Munich*, Munich, Germany.
Minor courses in communication acoustics, signal processing for audio, VLSI design and nanoelectronics.
GPA: 15/20

EXPERIENCE

- Oct 2020 – **Invited Assistant Lecturer**
/ Department of Electrical and Computer Engineering (DEEC), Faculty of Engineering, University of Porto
Porto, Portugal
- Oct 2020 – **Research Assistant**
/ Centre of Robotics and Autonomous Systems (CRAS) at INESC TEC
Porto, Portugal
- Feb – Oct 2020 **Undergraduate Researcher**
Centre of Robotics and Autonomous Systems at INESC TEC
Porto, Portugal
- Jun – Sep 2019 **Technical Supporter**
CIRC
Munich, Germany

TEACHING & EDUCATIONAL ACTIVITIES

Invited Assistant Lecturer

- **Integrated Masters in Electrical and Computer Engineering (MIEEC)** | Department of Electrical and Computer Engineering (DEEC) | Faculty of Engineering, University of Porto
- 2020/2021 **EEC0006: Laboratory of Digital Systems (LSDI)**, 1st semester, 7.5 ECTS.
- 2020/2021 **EEC0010: Electric Circuits (CIRC)**, 2nd semester, 7 ECTS.
- **Bachelor in Electrical and Computer Engineering (LEEC)** | Department of Electrical and Computer Engineering (DEEC) | Faculty of Engineering, University of Porto
- 2022/2023 **L.EEC005: Digital Systems (SD)**, 1st semester, 6 ECTS.
- 2021/2022 **L.EEC005: Digital Systems (SD)**, 1st semester, 6 ECTS.
- 2021/2022 **L.EEC008: Circuits 2 (CIR2)**, 2nd semester, 6 ECTS.

Bachelor Internship Supervisor

- Mar – Jul 2022 **Reconfigurable pinger for underwater acoustics applications: acoustic signal synthesis**, Tutor: José Carlos Alves, PhD.
Faculty of Engineering, University of Porto
- Mar – Jul 2022 **Reconfigurable pinger for underwater acoustics applications: parameterization, temporization and low-power modes**, Tutor: José Carlos Alves, PhD.
Faculty of Engineering, University of Porto

PUBLICATIONS

Peer-reviewed Conference Proceedings

- 2022 Paula A. Graça, José Alves, Bruno Ferreira, Multi-Objective Optimization of Sensor Placement in a 3D Body for Underwater Localization, *OCEANS 2022 Hampton Roads* - Accepted.
- 2022 Bruno Ferreira, José Alves, Nuno Cruz, Paula A. Graça, On the localization of an acoustic target using a single receiver, *OCEANS 2022 Hampton Roads* - Accepted.

Dissertations

- 2020 Paula A. Graça, Relative Acoustic Localization with USBL (Ultra-Short Baseline), Master's Dissertation, Faculty of Engineering, University of Porto, Supervised by José Carlos Alves and Bruno Ferreira. URL: <https://hdl.handle.net/10216/132656>.

Peer-reviewed Abstracts

- 2020 Filipa S. Barros, Paula A. Graça and Hélio S. Mendonça, Experimenting with RF-433MHz for Low-Cost Short Range for Edge Device Communications, IJUP 2020 - 13th Meeting of Young Researchers of the University of Porto. URL: <https://www.up.pt/ijup/edicao-2020/>.

PROJECTS

- 2021 – / **SPRING** Strategic planning for water resources and implementation of novel biotechnical treatment solutions (reference 821423), CRAS at INESC TEC, inesctec.pt/spring
- 2020 – 2021 **AutoMon**, Automated monitorization of hydric resources, CRAS at INESC TEC, inesctec.pt/automon
- 2020 **GROW**, Long-range broadband underwater wireless communications, CRAS at INESC TEC, inesctec.pt/grow

CONFERENCE ORGANIZATION

- 2021 **XXXVI Conference on Design of Circuits and Integrated Systems (DCIS'2021)** as Student Volunteer, Vila do Conde, Portugal, dcis2021.fe.up.pt
- 2018 **IEEE R8 Student & Young Professional Congress 2018** as Head of Branding, Porto, Portugal, syp.ieee-pt.org

GRANTS, HONORS & AWARDS

Grants

- 2021 – / **Research Grant (BI)**, SPRING project (reference 821423), by INESC TEC Porto, Portugal
- 2022 **Huawei Merit Scholarship**, by Huawei Portugal and .PT programadebolsashuawei.pt Lisbon, Portugal

Honors & Awards

- 2021 **National 3rd / international 1060th (of 5570)**, IEEEExtreme 15.0 ieeextreme.org Porto, Portugal (Online)

- 2019 **National 6th / international 714th (of 4134)** , IEEEExtreme 13.0 ieeextreme.org
Maia, Portugal
- 2019 **4th (of 10)** , Neeil It at CEiiA
Matosinhos, Portugal
- 2017 **1st place**, BEST SciTeCH'17 scitech.bestporto.org
Matosinhos, Portugal
- 2017 **2814th**, Google Hashcode 2017 hashcode.com
Porto, Portugal

ADDITIONAL TRAINING

- Jul 2022 **Marine Robotics Summer School** by the MIT Portugal, LSTS - Laboratório de Sistemas e Tecnologias Subaquáticas - and Okeanos - Institute of Marine Sciences: selected candidate (20 participants in total) for a 2 weeks intensive course on oceanography and underwater robotics. Açores, Portugal mitportugal.org/marine-robotics-summer-school
- Jun 2022 **International Conference on Underwater Acoustics 2022 (ICUA'22)** by the Institute of Acoustics: 4 days of technical sessions and networking. Southampton, United Kingdom icua2022.org
- Jan 2022 **Online CubeSat Concurrent Engineering Workshop 2022** by European Space Agency (ESA) Academy: selected candidate (19 participants in total) for a 50-hour training. Online esa.int/OCCEW22
- Jul 2021 **DEEPFIELD - Deep Learning for Image Classification and Segmentation** by Polytechnic University of Milan: 24-hour training. Online deepfieldproject.com
- Jul 2021 **22nd European Agent Systems Summer School (EASSS 2021)** by Artificial Intelligence and Computer Science Lab of the University of Porto (LIACC): selected candidate for a 30-hour training. Online easss2021.fe.up.pt
- Jun 2020 **Introduction to Machine Learning with Python** by OERN - Ordem dos Engenheiros Região Norte: 16-hour training, score 17/20. Online oern.pt
- May 2020 **Introduction to Python** by OERN - Ordem dos Engenheiros Região Norte: 16-hour training, score 20/20. Online oern.pt
- Oct 2019 **Participant in team Euphonic**, EUvsVirus Hackathon, Domain: Social & Political Cohesion euvsvirus.org
Porto, Portugal (Online)
- Nov 2019 **Introduction to real-time video processing on heterogeneous computing platforms - Zynq SoC** by Prof. Tomasz Kryjak, Computer Vision Laboratory in AGH University of Science and Technology Kraków Poland: 6-hour training. Online
- Oct 2019 **IEEE Leadership Camp 2019** by IEEE Portugal: 24-hour training. Lisbon, Portugal
- Fev 2017 **Microsoft IoT Labs** by Microsoft Portugal: 6-hour training. Faculty of Engineering of the University of Porto
- Oct 2016 **POP'16 - Programming for Optimization and Performance** by SPeCS research group: 5-hour programming competition. Porto, Portugal specs.fe.up.pt

OTHER ACTIVITIES

- 2016 – / **Member of IEEE University of Porto Student Branch**, Secretary of the Executive Committee (2019/2020), Robotics and Automation Society (RAS) co-funder and member (since 2017), Design and Communication department 2017-2020.
Organization of workshops, talks and technical thematic weeks
- 2020 – 2022 **Social Media Manager**, IEEE Portugal Section.
Communications team coordination, content creation and scheduling.

LANGUAGES & SKILLS

Languages	Portuguese (native), English (advanced), German (elementary), Spanish (elementary)
Technology	Matlab ^(4/5) , C ^(4/5) , C++ ^(4/5) , Signal Processing ^(4/5) , VHDL ^(3/5) , Verilog ^(3/5) , Python ^(3/5) , Embedded Systems ^(3/5)
Soft Skills	Teamwork, Communication, Critical Thinking, Observation, Problem-Solving, Adaptability
Tools	Autodesk Fusion 360, Adobe Photoshop, Adobe Premiere, Adobe Illustrator