



João Pedro Bastos Fula

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● EDUCATION AND TRAINING

09/2015 – 07/2020 – Rua Dr. Roberto Frias, Porto, Portugal

Integrated Masters in Electrical and Computer Engineering – Faculty of Engineering of University of Porto (FEUP)

Electrical and computer engineering:

- Specialized in automation;
- Specialized in robotics.

fe.up.pt

07/2017 – 07/2020 – Rua Dr. Roberto Frias, Porto, Portugal

University research assistant – Institute for Systems and Computer Engineering, Technology and Science- INESC TEC

- Develop software in C++ and Matlab to be integrated in an autonomous underwater vehicle.
- Study of several localization and mapping techniques.
- Study of every block that composes an AUV.
- Develop software for post processing of sensors data.
- Write articles to be published in conferences.
- Document the changes done to the vehicle.
- Lead the "Yellow Submarine" team on the application to the Singapore AUV Challenge (SAUVC) 2020 competition.

Field(s) of study

- Underwater robotics
- Software development

<https://www.inesctec.pt/en>

03/02/2020 – 31/07/2020 – Rua Dr. Roberto Frias, Porto, Portugal

Coordinator – "FEUP Buddy" program

- Responsible for making the connection between the students in the "FEUP Buddy" Program and the administrative charges from FEUP.
- Responsible for creating and monitoring events.
- Responsible for the well being of all involved and making sure that all the rules are being followed.

https://sigarra.up.pt/feup/pt/web_base.gera_pagina?p_pagina=feup%20buddy

22/10/2018 – 25/10/2018 – 400 2nd Ave SW, Charleston, United States

Conference – Oceans 2018 Charleston

Poster title:

AUV Self-localization in Structured Environments Using a Scanning Sonar and an Extended Kalman Filter

João P. Fula; Bruno M. Ferreira; António J. Oliveira

Participation in the student poster competition during the conference that involved a short presentation of the developed poster to a series of judges and interested people.

<https://charleston18.oceansconference.org/>

05/03/2017 – 07/2020 – Rua Dr. Roberto Frias, Porto, Portugal

IEEE Member – Institute of Electrical and Electronics Engineers

Participate and aiding in the organization of workshops and conferences.

05/03/2017 – 07/2020 – Rua Dr. Roberto Frias, Porto, Portugal

RAS Member – Robotics and Automation Society IEEE Student Chapter U.Porto - Faculty of Engineering

Group of students focused on researching and developing projects in the field of Robotics:

- Development of robots to attend competitions;
- Research new technologies and learn its capabilities in the area of Robotics;
- Sharing knowledge through workshops;
- Extend overall knowledge in Robotics.

19/09/2018 – 24/01/2019 – Univerzitná 8215/1, Zilina, Slovakia

Participant in the "Erasmus" program – University of Zilina

Studies in:

- Electrical engineering;
- Economy and management.

02/2017 – 07/2020 – Rua Dr. Roberto Frias, Porto, Portugal

Voluntary work – "FEUP Buddy" program

Reception of Erasmus students in order to facilitate their arrival to our faculty and overall life in Portugal.

https://sigarra.up.pt/feup/pt/web_base.gera_pagina?p_pagina=feup%20buddy

25/07/2018 – 29/07/2018 – J201, FEUP, Rua Dr Roberto Frias, Porto , Portugal

Voluntary work – Students and Young Professionals conference - SYP 2018 Porto

<https://syp.ieee-pt.org/>

09/2012 – 06/2015 – Largo Luís de Camões, Gondomar, Portugal

High School – Gondomar high school

Science and Technologies Course.

<http://www.aeg1.pt/>

● LANGUAGE SKILLS

Mother tongue(s): **PORTUGUESE**

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C1	C2	C2
FRENCH	A2	A2	A1	A1	A2
POLISH	A1	A2	A1	A1	A1
SLOVAK	A1	A2	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● DIGITAL SKILLS

Matlab | SQL | Python | CC++ | Pascal | Javascript | ST FBD SFC IL | Unity pro
Codesys | Git | ROS | Agile (Scrum) | Linux | Selenium | Docker | HTML

● PUBLICATIONS

Underwater Mapping Using a SONAR

2020

Masters dissertation in the Integrated Masters course in the Faculty of Engineering of University of Porto in cooperation with INESC TEC. Several mapping and localization algorithms were studied and finally a probabilistic method of occupancy state attribution to the voxels of an Octomaps representation, together with a particle filter were selected to form the algorithm. The algorithm was developed using Matlab.

AUV Self-localization in Structured Environments Using a Scanning Sonar and an Extended Kalman Filt

<https://ieeexplore.ieee.org/document/8604798> – 2019

The publication, *AUV Self-localization in Structured Environments Using a Scanning Sonar and an Extended Kalman Filter*, was one of the results of the research done in Faculty of Engineering of University of Porto. Several localization algorithms were studied and finally an extended kalman filter was selected to autonomously find the position of an AUV within a structured environment. The algorithm was developed in Matlab.

● **DRIVING LICENCE**

Driving Licence: B

● **ORGANISATIONAL SKILLS**

Project management skills

- Knowledge on the basis of management and marketing, result of several classes throughout the course.
- Team leading skill that result from being the team leader in many classes throughout the course and in extracurricular activities.
- Knowledge of challenges that arise from managing a team in competitive environments.

● **COMMUNICATION AND INTERPERSONAL SKILLS**

Communication and interpersonal skills

Participating in the "Buddy Program" and in the "Erasmus Program" allowed me to:

- Improve social and communication skills;
- Learn, improve and practice other languages;
- Promote the ability to understand culture diversity.

Researching in the RAS and in the INESC TEC research group, accredited my ability to communicate assertively in a group.

Participating in the student poster competition allowed me to practice the presentation of my work in front of interested people and in stressful situations.

● **OTHER SKILLS**

Other skills

- Learning skills: always ready to learn more about the areas of specialization as well as any other area that may spike interest. The ammount of years spent learning have made me a fast learner.
- Teamwork skills: credited by having been in the rowing team for three years ,in a basketball team for two years and by competing in Online gaming tournaments in large teams.
- Creative skills: through the guitar, through modelation tools or through programming.