



Industrial Electronics and Computers Engineer

Inês Sofia Moreira Garcia

+351/919588985 Ines.sofia.garcia@gmail.com www.linkedin.com/in/ismg



ADDRESS

S. Victor
Braga, Portugal



ABOUT ME

I exercise a high-attention to detail, ensuring accuracy and consistency in my performance, collaborative teamwork, and on-time completion of all projects.



MOTHER LANGUAGE

Portuguese

FOREIGN LANGUAGES

English

French

German



EDUCATION

Jan 2019 **Master's Degree in Industrial Electronics and Computers Engineering**
Sep 2013 **(Final grade of 17) – EQF level 7**

University of Minho

Guimarães, Portugal

- Master's specializations:
 - Control, Automation and Robotics (CAR);
 - Micro-technologies (MT).
- Dissertation: High Precision MEMS Accelerometer for Microsatellites (final grade of 20 values).
 - Developed on MT specialization, at INL - International Iberian Nanotechnology Laboratory.
 - Development of a geodetic-grade MEMS accelerometer, based on the measurement of pull-in time.
- Divided into four phases: sensor design (analytical and numerical analysis), FEM simulation, devices micromachining (200-mm SOI wafer) and characterization of the MEMS accelerometer.



WORK

Present **Associate Member - MPA**
Jan 2018 *International Iberian Nanotechnology Laboratory*
Braga, Portugal

- Associate Member in Micro and Nanofabrication Department, during the Master's dissertation.

Jul 2018 **Scientific Research Scholarship**
Nov 2017 *Universidade do Minho - BOSCH Projecto INNOVCAR*

Aug 2013 **Curricular Stage**
Nov 2012 *ITEC - Itec Iberiana Technical*
Guimarães, Portugal

- Management of the new website. Introduction, translation and management of the various products on the sales site.



PERSONAL SKILLS

Communication



Organization



Leadership



Adaptation



Focus



Deadline Completion



PROFESSIONAL SKILLS

Microsoft Office App



Matlab



Assembly, C, C++, C#, SQL



PCB Design (Eagle and Altium)



CAD Modelling



FEM (Ansys and COMSOL)



MEMS SKILLS

Layout Design



Microfabrication process



Cleanroom Experience



Metrology Systems



PUBLICATIONS

MEMS ○ **I.S. Garcia** et al., "Sub-micron MEMS Accelerometer With Handle-layer Patterning For Damping Enhancement Using Time Transduction", *Transducers 2019 - EUROSENSORS XXXIII Conference*, Berlin. doi: 10.1109/TRANSDUCERS.2019.8808247

Robotics ○ T. Ribeiro, **I. Garcia**, D. Pereira, J. Ribeiro, G. Lopes and A. F. Ribeiro, "Development of a prototype robot for transportation within industrial environments," *2017 IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC)*, Coimbra, 2017, pp. 192-197. doi: 10.1109/ICARSC.2017.7964074

I. Garcia, et al., "Autonomous 4DOF Robotic Manipulator Prototype for Industrial Environment and Human Cooperation", *2019 IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC)*, Gondomar, 2019. doi: 10.1109/ICARSC.2019.8733639

T. Ribeiro, F. Gonçalves, **I. Garcia**, G. Lopes, A.F. Ribeiro, "Q-Learning for Autonomous Mobile Robot Obstacle Avoidance", *2019 IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC)*, Gondomar, 2019. doi: 10.1109/ICAL.2007.4338568

F. Gonçalves, T. Ribeiro, **I. Garcia**, A.F. Ribeiro, C. Monteiro, G. Lopes, "Development of an Anthropomorphic Mobile Manipulator with Human, Machine and Environment Interaction", *FME Transactions*, 2019, pp. 790-801.



HONOURS AND AWARDS

○ **2018, 2015, 2014 Excellence Scholarship ("Bolsa de Excelência"), University of Minho**
The student who had the highest grade in the previous curricular year.

○ **RoboCup World Competition**
Internation Competition of Robotics

- "Soccer Junior Open League":
 - RoboCup'15, Hefei, China. 1st place in Superteam; Innovation Award; Honourable Mention of Best Design; Honourable Mention of RoboCup Spirit.
- "Rescue A Junior":
 - RoboCup'13, Eindhoven, The Netherlands. Individual League 3rd place.
 - RoboCup'11, Istanbul, Turkey. Superteam 1st place.
 - RoboCup'10, Singapore. Individual 7th place

○ **"Festival Nacional de Robótica – FNR"**
National Competition of Robotics from Portugal

- "Freebots", 2017 Coimbra, 1st place.
- "@Factory", 2016 Bragança, 3rd; 2019 Gondomar, 1st place.
- "Autonomous Driving", 2015 Vila Real, 6th place.
- "Rescue B Junior", 2014 Espinho, 4th place.
- "Rescue A Junior", 2013 Lisbon, 3rd place; 2012 Guimarães, 2nd place; 2011 Lisbon, 3rd place; 2010 Leiria, 2nd place; 2009 Castelo Branco, 4th place.



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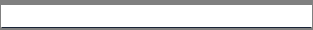
Matlab



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EXTRACURRICULAR ACTIVITIES

RoboParty

Robotics Educational Event

- RoboParty staff and organization in the 2014, 2015, 2016, 2017, 2018 and 2019 editions.

“Verão no Campus”

University of Minho summer school for high school students.

- Lecturer and educator in the 2016 edition of the event "Summer in Campus", inserted in the area of robotics and automation, both hardware and software.

“Engenheiras por um dia”, 2019

Pilot project of the professional choice desegregation program, which aims to prevent and combat the segregation of occupations by gender.

- Oral presentations about the life of a women engineer on several basic schools.

Toys Adaptation

Project created by the laboratory of automation and robotics (LAR) from the University of Minho, dedicated on the adaptation of electronic toys for children with physical restrictions.

- Volunteer in the 2014, 2015, 2016, 2017, 2018 and 2019 editions.

CHARMIE Project

An anthropomorphic mobile manipulator robot (CHARMIE) is being developed by the University of Minho's Automation and Robotics Laboratory (LAR). The robot gathers sensorial information and processes using neural networks, actuating in real time. Started on 2017.



Robotics – 3D Printing – Drawing – Painting – Baking

HOBBIES