Luca Iezzi

Address: Italy

WORK EXPERIENCE

[07/2021 – 10/2021] **Underwater Internet of Things Researcher**

WSENSE Srl

City: Rome
Country: Italy
Main activities and responsibilities:
Design and development of navigation and cooperation support localization techniques for submarine robots networks.

[12/2020 – 07/2021] **Research Assistant**

SENSES Lab, Sapienza University of Rome

City: Rome
Country: Italy
Main activities and responsibilities:
Design and development of protocols for networks of Underwater Autonomous Vehicles.

EDUCATION AND TRAINING

[11/2021 – Current] **Ph.d. in Engineering in Computer Science**

Sapienza University of Rome   https://www.diag.uniroma1.it/

Address: 00185, Rome, Italy
Level in EQF: EQF level 8
Main subject / occupational skills covered:
Research Topic: Learning-based Multi-modal Navigation, Communication and Localization Algorithms for Networks of AUVs.

[09/2019 – 10/2021] **M.Sc. in Computer Science**

Sapienza University of Rome   https://www.di.uniroma1.it/

Address: 00198, Rome, Italy
Final grade: 110L/110   **Level in EQF:** EQF level 7
Thesis: Autonomous Underwater Vehicles Localization: Design, Implementation and Experimental Evaluation of a Long Baseline Method
Main subject / occupational skills covered:
The thesis is centered around the development of a localization algorithm for the sake of robot navigation using Extended Kalman Filters (EKF) on an AUV/ROV, running Robot Operating System (ROS), in a maritime environment using a Long Baseline (LBL) acoustic system in several different scenarios. The results have been validated on-field tests at sea. Part of the results obtained have been presented at the IEEE WCNEE Conference where the paper got the Best Paper Award Runner-Up.

[09/2015 – 05/2019] **B.Sc. in Computer Science**

Sapienza University of Rome   https://www.di.uniroma1.it/

Address: 00198, Rome, Italy

Level in EQF: EQF level 6

Thesis: GreenRoutes-NORTS: a cross-layer protocol for Green Wireless Sensor Networks

Main subject / occupational skills covered:
The thesis is centered around the extension of a known protocol for Green Wireless Sensor Networks (GWSN) by means of an optimized handshake protocol that takes advantage of the energy-harvesting capabilities of the sensors in use and the Wake-up Radios (WUR) technology to guarantee longer lifetime and better performance to the network. Both protocols have been implemented and compared using the simulation framework Green Castalia in C++ language.

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C1 **READING** C2 **WRITING** C2

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

DIGITAL SKILLS

C | C++ | Python | Bash | AI platform: Pytorch, Tensorflow etc. | Pandas, Numpy, Scikit-learn, Scipy libraries | OpenCV | NS-3 (Network smulator) | Gazebo simulator | Castalia | Robotic Operative System (ROS) | Git | Unix - Linux (Optimal Knowledge) | Good command of Arduino, Raspberry Pi platforms | LAteX

PUBLICATIONS

[2021]

Localizing Autonomous Underwater Vehicles: Experimental evaluation of a long baseline method

https://ieeexplore.ieee.org/document/9600067

CONFERENCES AND SEMINARS

[03/2022] **Intelligent Autonomous Systems in Extreme Environments**   Rome, Italy

[01/2022]

Distributed output-feedback observer-less consensus control of nonholonomic systems over networks with communication delays.
   Rome, Italy

[10/2021] **Maker at Maker Faire Rome 2021 IX Edition.**   Rome, Italy

Presenting some of the latest acoustic communication technologies for Underwater Sensor Networks

[07/2021]

Author at IEEE International Workshop on Wireless Communications and Networking in Extreme Environments (IEEE WCNEE) 2021.

Pafos, Cyprus

[07/2021]

Attendee at International Conference on Sensing, Communication and Networking (IEEE SECON) 2021.

Virtual

HONOURS AND AWARDS

[11/2021] **Sapienza PhD Scholarship winner (2nd place finisher) Awarding institution:** Sapienza University of Rome

[07/2021] **Best Paper award runner-up at the IEEE WCNEE 2021 conference Awarding institution:** IEEE Workshop on Wireless Communications and Networking in Extreme Environments

[2021] **Research team member in Sapienza and WSense Srl projects**

- PNRM FRONTCOM, funded by the Italian Ministry of Defense on next generation wireless underwater acoustic communication technologies.
- PNRM MEDUSA, funded by the Italian Ministry of Defense on next generation underwater wireless communication and networks of underwater robots.
- POR TEAM, funded by Lazio Innova, on Internet of Underwater Things systems for underwater archaeological sites discovery, monitoring, surveillance and valorization.

[12/2020] **Research scholarship (Borsa di Studio per Attività di Ricerca) Awarding institution:** Sapienza University of Rome, Computer Science Dept.

Research activity on Underwater Mobile Sensor Networks.

CERTIFICATES

[02/2021] **C2-Proficient EF Standard English Test(EFSET)**
https://www.efset.org/cert/HCRMRM

[12/2015] **Adobe Certified Associate (ACA) - Dreamweaver**
https://portal.certiport.com/Portal/Pages/PrintTranscriptInfo.aspx?action=Cert&id=137&cvid=5xJojsUSqAzaI/J4B29gXw==

[12/2015] **PHP Developer Fundamentals on MySQL ® Environment**