

MONUSEN Training in the field of robotics and multi-robot systems

AGENDA

Day 1: 16 November 2023 (Thursday)

13:15 - 14:00	Distributed mission planning of multi-robot systems by Barbara Arbanas
14:15 - 15:00	Ferreira, PhD
15:00 - 15:30	Discussion

Day 2: 17 November 2023 (Friday)

10:15 - 11:00	Consensus-based environmental monitoring for underwater sensor
	networks by Barbara Arbanas Ferreira, PhD
11:00 - 11:15	Break
11:15 - 12:00	Multi-robot systems for maritime security scenarios by Barbara Arbanas
	Ferreira, PhD
12:00 - 13:00	Lunch Break
13:15 - 14:00	Multi-domain maritime robotics and by Assist. Prof. Fausto Ferreira
14:00 - 14:15	Break
14:15 - 15:00	Legal issues of robot operations at sea by Assist. Prof. Fausto Ferreira
15:00 - 15:30	Discussion

^{*}Basic knowledge of robotics; Basic knowledge of communication system



^{**}VENUE - Monusen lab, University of Montenegro, Faculty of Electrical Engineering (UoM), Cetinjska 2, Podgorica 81000, Montenegro/zoom platform



BIOGRAPHIES OF LECTURERS

Barbara Arbanas Ferreira, PhD



Dr. Barbara Arbanas Ferreira is a postdoctoral researcher in the Laboratory for Underwater Systems and Technologies (LABUST) at the University of Zagreb Faculty of Electrical Engineering and Computing (UNIZG-FER). She received her PhD in February 2022 from the UNIZG-FER on the topic of decentralized coordination of heterogeneous multi-robot systems under the supervision of Prof. Stjepan Bogdan. To date, she has authored or co-authored one book chapter, 5 journal papers, and 9 conference papers. Her interests include multi-robot coordination and planning, distributed artificial intelligence, scheduling and optimization. She has been involved in several international and national research projects, including H2020 project subCULTron, FP7 EuRoC, and the Croatian Science Foundation project SpECULARIA. She also participated in the ERL Emergency Robots 2019 and MBZIRC 2020 robotics competitions as a member of the LARICS team. She is currently working on a Horizon Europe project SeaTecHub and leading the team UNIZG-FER in the MBZIRC 2023 competition.









Dr. Fausto Ferreira is an Assistant Professor at the University of Zagreb, Faculty of Electrical Engineering and Computing. His research activities are conducted within the Laboratory for Underwater Systems and Technologies (LABUST). He has been involved in 15 EU Projects (FP6, FP7, H2020, Horizon Europe, INTERREG, Erasmus+) and 2 Office of Naval Research Global (ONRG) projects (including a Visiting Scientist Program grant). He is the Coordinator of the Erasmus+ project Marine Robots for better Sea Knowledge awareness (MASK). He has been the Deputy Technical Director of 6 Robotics competitions (SAUC-E 2014, euRathlon 2014, euRathlon Grand Challenge 2015, ERL Emergency 2017-2019) and Technical Director of 1 robotics competition (SAUC-E 2016). He has also been PI and co-PI of two U.S. Office of Naval Research Global funded projects and is currently PI of two EU funded projects. Dr. Ferreira is a senior member of IEEE and the Vice-President for Workshops and Symposia of the IEEE Oceanic Engineering Society (OES). He serves as an Associate Editor of the IEEE Journal of Oceanic Engineering. He is the General Chair of EMRA' 2023 Workshop. He has been a member of many conference organizing committees (including Technical Co-chair of OCEANS 2021 San Diego - Porto). He has been awarded the 2023 IEEE OES Distinguished Service Award. He holds over 60 peer-reviewed papers including a patent and two book chapters and has reviewed for over 20 international journals. His research interests include underwater computer vision, sonar processing, marine law for unmanned marine vehicles, robotics competitions, and educational robotics. This project has





received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101060395. He holds a PhD in Robotics, an Integrated Master in Electrical and Computer Engineering and a Bachelor in Political Science with a thesis on regulatory aspects of autonomous surface vessels.

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