Veronika Yordanova

veronika.yordanova.11@gmail.com; +447583571681; La Spezia, Italy

Work Experience

Sep 2018 - Present — Visiting Scientist, Centre for Maritime Research and Experimentation (CMRE), La Spezia, Italy

- Machine intelligence and autonomy for mine countermeasures.

July 2017 - Dec 2017 — Visiting Researcher, National Oceanography Centre (NOC), Southampton, UK

- Applying intelligent decision-making algorithms for adaptive sampling application with a small AUV.
- Focus on planning and learning (reinforcement learning).
- Project involves collaboration between multiple institutions and heterogeneous team of scientists and engineers.
- AUV trial preparation and participation (ecoSub).

Aug 2016 - June 2017 — Researcher, Atlas Elektronik, Bremen, Germany

- Developing mission planning algorithm for AUVs in mine countermeasures application.
- Focus on stochastic and optimal decision-making algorithms.
- AUV trial preparation and participation (Seacat and Seahorse)

Jan - May 2016 — Teaching Assistant, University College London (UCL), London, UK

- Teaching concepts and mathematical principles of Game Theory module to a class of 15 people.

Sept - Dec 2014 — Lab demonstrator, UCL, London, UK

- Responsible for supervising 5 simultaneous laboratory courses in Electronic and Electrical Engineering (40 2nd year students) with over 100 reports produced and marked

Education

Sept 2013 - Feb 2018 — PhD: Electronic and Electrical Eng, University College London (UCL), London, UK

- Thesis: Intelligent Adaptive Underwater Sensor Networks
- Developing a planning algorithm for multiple autonomous underwater vehicles (AUVs) for mine countermeasures.
- Focus on adaptive and intelligent decision making algorithms, resource management and task allocation, cooperative robotic networks.
- Validation in simulation (MOOS-IvP) and trial experiments.

Sept 2012 - Sept 2013 — MRes: Security and Crime Science (Grade Merit), UCL

- Multidisciplinary degree with focus on research methods, with quantitative and social science modules in security and crime applications.
- Thesis: Underwater communications

Sept 2011 - Sept 2012 — MSc: Spacecraft Technology and Satellite Communications (Grade Distinction), UCL

- Degree focused on development and management of a space mission.
- Designing payload for a feasibility study in a 20−person group project.
- Thesis: Measurement and modelling of the bistatic radar signature of wind turbines

Sept 2007 - Sept 2011 — BEng: Aeronautical Engineering (Grade 5.14/6), Technical University Sofia

Publications

Journal:	Yordanova, V, Griffiths, H and Hailes, S, "Rendezvous Planning for Multiple Autonomous Underwater Vehicles using a Markov Decision Process," - IET Radar, Sonar & Navigation, 2017
Journal:	Yordanova, V, and Griffiths, H, "Rendezvous Point Technique for Multi-Vehicle Mine Countermeasure Operations in Communication-Constrained Environments," Marine Technology Society, 2016
Conference:	Yordanova, V, and Griffiths, H, "Synchronous Rendezvous Technique for Multi-Vehicle Mine Countermeasure Operations," OCEANS'15 MTS/IEEE Washington. 2015.

Poster presentations

2017:	Marine Autonomy & Technology Showcase (MATS), UK
2016, 2017:	Student Radar Conference, UK
2014, 2015, 2016:	Barlow/Mildner Memorial Research Poster Open Day, UK
2014, 2015, 2016:	International Crime Science Conference, UK

Awards

2016:	Marie Curie Early-Stage Researcher Fellowship
2014:	Scholarship for Strategic Innovation course at London School of Economics
2014:	First prize in a poster competition at the International Crime Science Conference
2012:	Engineering and Physical Sciences Research Council (EPSRC) Studentship
2012:	PhD Studentship from Atlas Elektronik UK

Courses

2017:	Deep Learning and Reinforcement Learning Summer School in University of Montreal
2016:	Machine Learning course organised by UCL
2016:	Deep Learning using TensorFlow course organised by NVIDIA

Languages and Skills

Languages:	English (fluent), Bulgarian (native), Russian (basic)
Programming:	python, MATLAB, C++
Tools and OS:	MOOS-IvP, Ubuntu, Latex