Veronika Yordanova

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Education

Sept 2013 - Present — PhD: Security and Crime Science, UCL
- Thesis: Intelligent Adaptive Underwater Sensor Network
- Project: Naval mines are inexpensive and easy to deploy but it is time consuming and costly to clear a mine field. Currently, the possibility of using multiple autonomous underwater vehicles (AUVs) over conventional methods is being studied. Advantages include extended coverage area, potential cost and time efficiency, and more robust performance. A common issue that slows advancement in the underwater field is the limited available communication between platforms. The solution this PhD project proposes is scheduling meeting points for the vehicles so they can exchange status and mission information. So far, an adaptive method has been developed that adopts a greedy algorithm to enable task reallocation between the vehicles. The current work is focusing on an optimal planning method using an MDP. An article on the topic was submitted to a journal for review in March 2017.
- Industry placement: Atlas Elektronik GmbH, Bremen, Germany, August 2016 - Present

Sept 2012 - Sept 2013 — MRes: Security and Crime Science (Grade Merit), UCL
- Multidisciplinary degree with focus on research methods, quantitative modules and social science applications.
- Thesis: Underwater communications

Sept 2011 - Sept 2012 — MSc: Space Science and engineering (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

Work Experience

Jan - March 2016 — Teaching Assistant, UCL
- Teaching concepts and mathematical principles of Game Theory module to a class of 15 people.

Sept - Dec 2014 — Lab demonstrator, UCL
- Responsible for supervising 5 simultaneous laboratory courses in Electronic and Electrical Engineering (40 2nd year students) with over 100 reports produced and marked

Publications

Journal: Yordanova, V, and H Griffiths, "Rendezvous Point Technique for Multi-Vehicle Mine Countermeasure Operations in Communication-Constrained Environments," - approved for publication in Marine Technology Society Journal Volume 50, Number 2: March/April 2016

Conference: Yordanova, V, and H Griffiths, "Synchronous Rendezvous Technique for Multi-Vehicle Mine Countermeasure Operations," OCEANS'15 MTS/IEEE Washington. 2015.

Awards

2016: Marie Curie Early-Stage Researcher Fellowship
2014: First prise in a poster competition at the International Crime Science Conference
2013: Engineering and Physical Sciences Research Council (EPSRC) Studentship
2013: PhD Studentship from Atlas Elektronik UK

Languages and Skills

Languages: English (fluent), Bulgarian (native), Russian (intermediate/business)
General Software: python, MATLAB and C++
Tools: MOOS-IvP