

Verification & Validation of Autonomous Systems — an EPSRC-funded UK research network

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What is it?

Network on the Verification & Validation of Autonomous Systems

EPSRC funded Network

Start of funding: 1st Sept 2015, for 3 years.

Aims to

stimulate, coordinate, promote, and disseminate research
on the verification and validation of autonomous systems

Across all *Techniques*

- Simulation and Testing
- Formal Proof
- User Validation
- Autonomous Agents and Multi-Agent Systems
- Hybrid Control Systems
- Human Robot Interaction
- Probabilistic Verification
- Model-Checking
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Across all *Potential Applications*

- Safety Critical Systems
- Certification of Unmanned air vehicles
- Safe (and road-worthy) driverless cars
- Autonomous robotics in nuclear/chemical/biological processes
- Human-robot teamwork, both in work and home contexts
- Deep underwater/space/underground exploration
- Autonomous ocean surface monitoring and exploration
- Autonomous sensing and control in smart cities
- Trustworthy robotic assistants for home and health-care
- Robotic diagnosis, rehabilitation, or surgery
- Autonomous satellites handling sensing/monitoring/comms
- Precision farming
- Robotic search, cleanup or rescue
- Nano-robotics
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Across all *Issues*

- Legal Issues, Standards, and Certification
- Validation
- Reliability and Robustness
- Robot Ethics
- Predictability and Uncertainty
- Safety and Security
- Fault Tolerance
- ...

So far

Website: <http://cgi.csc.liv.ac.uk/~michael/VaVAS>

Sep 2015: *Agent Verification Workshop*, Liverpool

<http://cgi.csc.liv.ac.uk/~maryam/AVWorkshop15.html>

Dec 2015: This *Winter School*, York

<https://www.cs.york.ac.uk/circus/RoboCalc-event>

Planned

22nd Feb 2016: *V&V for Certification/Regulation*, London

Workshop speakers so far from

Civil Aviation Authority, Office for Nuclear Regulation, Centre for Connected and Autonomous Vehicles, Rail Safety and Standards Board, British Standards Institution, as well as a range of academic speakers.

Jun 2016?: *V&V and Industry Workshop*, Sheffield
[Part of TAROS 2016]

Sep 2016??: *Annual Academic Workshop*, (Bristol?)

Get Involved

Join the mailing list — see

<http://cgi.csc.liv.ac.uk/~michael/VaVAS/members.html>

Come to events

Propose future activities