

IEEE RO-MAN Workshop on Challenges of Human-Robot Interaction in Extreme and Hazardous Environments

CALL FOR PAPERS

Call for Papers

Currently a common challenge across many tested and deployed RAS technologies for harsh environments like nuclear inspection and decommissioning, offshore energy and maintenance, space exploration and deep mining, search and rescue are associated with intelligence and autonomy, along with operator involvement. For such applications, interactions with robots are difficult to model due to reasons such as dynamics, uncertainty, complexity and unpredictability. The workshop focuses to enable a cross fertilisation of ideas and solutions for issues encountered when attempting to generate complex models of interaction between robots and humans, in extreme environments and the limitations and benefits of different interaction scenarios of robotic in harsh environments. The topics covered are:

- Trust in Human – Robot Interaction
- Human factors for using robotic devices in extreme environments
- Language and non-verbal communication with Robotic solution
- Cognitive architecture for variable autonomy
- Visualisation tools and AI
- Deep learning for HRI
- Human-robot interfaces for remotely operating robots in extreme environments, including AR/VR/MxR immersive technologies.
- Safe switching between levels of autonomy for human-in-the-loop tele-operation.

The workshop will have two forms of presentation: a 15 minutes oral presentations for accepted papers and a 3 minutes spotlight presentation followed by a 1-hour poster session for extended abstracts.

Important Dates:

August 31, 2019 – Paper/Video submission deadline

September 15, 2019 – Notification of acceptance

October 1, 2019 – Camera- ready submission

Papers/Videos (10mb max) are to be sent to

Roman2019workshop@rainhub.org.uk

Organizers:

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