TRACK 15: Collaborative Robots for Emergency Situations

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THE TRACK OVERVIEW

Robots designed for direct human-robot cooperation (HRC) in a shared environment are referred to as collaborative robots (cobots). Novel scientific trends in cobots research are moving the technology from predictable spaces like production lines into disaster zones. Cobots can collaborate with their human teammates in the aftermath of earthquakes, accidents, avalanches, or explosions, reducing the risk to human life and enhancing the likelihood of rescuing victims. In this track, authors are invited to share their research focusing on the fact that the collaboration between humans and robots needs to go much further – rather than seeing robots as tools or mobile sensors, they need to be seen as a team member in emergency situations. We welcome contributions from scientists, practitioners, end-users, and first responders.

TRACK TOPICS

Possible topics of interest for this track include, but are not limited to the following:

– *Search and Rescue (SAR) collaborative robots (cobots)*
– *human-robot cooperation (HRC) in emergency scenarios*

– haptics for emergency scenario
– robot control algorithms for emergency scenarios
– robotic sensors and actuators for emergency scenarios
– ethical issues for human-robot cooperation (HRC) in emergency scenarios
– Machine Learning (ML) and Artificial Intelligence for robotics in emergency scenarios
– Robotic simulation for emergency scenarios
– Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR), Extended Reality (ER) for robotics in emergency scenarios

TRACK CHAIR AND CO-CHAIR

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