Collaborative Robots (Cobots) for Emergency Situations

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Theme: "Building Humanitarian Technologies for our Emerging Future + Building Resilient Societies"

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https://iscram2023.net/

INTRODUCTION TO THE TRACK

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

Topics of interest include the following, but are not limited to:

- 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

AUTHORS

All three track chairs are actively involved in the research community as well as international projects. They have a large network of researchers and practitioners, which will be used to advertise the conference in general and the track in particular. Hence, it is planned to not only have theoretical contributions but also attract experts from critical infrastructure operators to submit Practitioner Papers to the track. Out of their network, the track chairs will also recruit a number of experienced reviewers to guarantee high quality reviews for all submitted papers of the track.

TRACK CHAIR AND CO-CHAIR

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