1ST INTERNATIONAL CONFERENCE on HYBRID SOCIETIES 2023

CALL FOR PAPERS

In hybrid societies, humans and embodied technologies need to coordinate efficiently. **Hybrid societies** arise when embodied digital technologies functioning as artificial agents mingle with humans in public environments. Imminent examples of embodied technologies interacting with humans in public environments are highly automated and driverless vehicles mixed with human-driven vehicles and human road-users in traffic as well as urban robots for street-cleaning, service, or delivery. Coordination of humans with fellow humans in public environments is relatively smooth. For interactions in hybrid societies to be effective and similarly smooth, human capabilities and technological functionalities must be analyzed and harmonized in novel ways.

Coordination in hybrid societies involves perceiving and tracking behavior, assessing each other's capabilities, states, and situation-specific intentions in encounters for prediction, implicit and explicit communication, and movement plan-ning and control. Coordination can be studied at the level of individual encounters and human-machine interfaces up to the level of whole socio-technical systems encompassing joint activities of human and artificial agents.

The first international Conference on Hybrid Societies is organized by the DFG-funded Collaborative Research Center Hybrid Societies at Chemnitz University of Technology (CRC 1410 Hybrid Societies funded by the German Research Foundation), in which a highly interdisciplinary group of researchers from psychology and engineering sciences to mathematics and computer science to the social sciences and humanities address the challenges of shaping the co-existence of humans and machines in public environments. **For Hybrid Societies 2023, we invite contributions that report original novel research findings on human-machine interaction in hybrid societies and contributions that advance required technological innovations including AR/VR technologies for embodiment and simulation.** The conference is single-track. The final program will be the result of a selective peer-review process based on the quality, originality, and relevance of submissions and will include presentations of refereed papers and keynote talks. A Best Paper Award will be provided to the most outstanding contributions by a committee of experts. The conference proceedings will be published in a peer-reviewed book by Springer and a selection of extended contributions will be invited to be submitted to special issues in renowned international scientific journals.
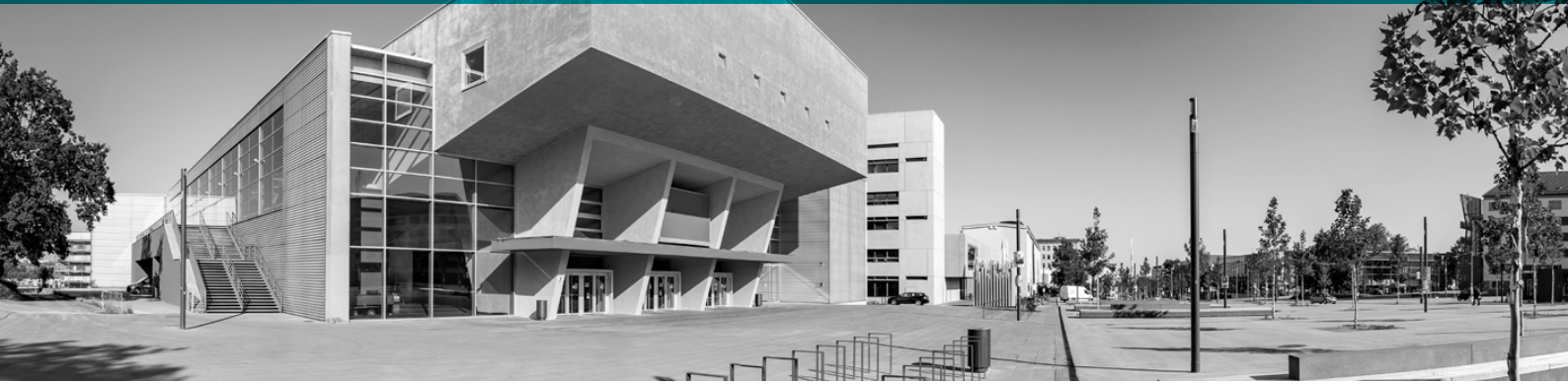

UNIVERSITY OF TECHNOLOGY
IN THE EUROPEAN CAPITAL OF CULTURE
CHEMNITZ

EXAMPLES OF TOPICS

Socio-technical systems with embodied digital agents:
· coordination of humans and embodied digital technologies
· automated driving and urban robotics
· smoothly resolving space-sharing conflicts
· coordination of joint actions
· shared intentionality
· adaptive autonomy and coactive design
· cooperation and trust in first encounters
· acceptance, credibility, and (legal) responsibility of artificial agents
· framing and modulating interaction
· cultural differences
· resilience engineering of joint cognitive systems

Perceiving and assessing interaction partners:
· human behavior tracking
· recognition and displays of gaze, gestures, and postures
· assessing capabilities
· social perception
· anthropomorphism, zoomorphism
· human-like behavior and movement styles
· adaptive interaction

Predicting behavior for joint action:
· recognizing and predicting intentions
· joint attention
· epistemic modeling
· theory of mind
· action prediction
· dynamic coupling

Interaction for coordination:
· implicit communication
· multimodal interaction
· language for coordination and repair

Motion tracking and control:
· body-attached sensors and actuators
· sensory feedback
· haptic feedback
· teleoperation and telemanipulation
· shared autonomy
· spatial orientation, telepresence, and spatial updating
· interaction with teleoperators

SUBMISSIONS

Submissions for oral presentations presenting original and unpublished work are solicited on all topics of hybrid societies. Authors may choose to submit in either one of two ways.
· For inclusion in an edited volume (Springer): papers submitted for inclusion in a peer reviewed publication should be 5-6 pages in length. If accepted, reviewer comments will be sent to allow for revision for publication.
· Short papers not aimed at book publication should not exceed 1,200 words (including figures, tables, and references). Some short paper submissions may be accepted for poster presentation.

All submissions must be written in English, formatted according to APA standards. All submissions will be reviewed by the Program Committee. Accepted submissions must be presented at the conference (at least one author of each submission must register to be included in the program). Proceedings will be indexed in WoS and SCOPUS. All submissions must be made electronically through the online submission system ConfTool.

HYBRID SOCIETIES

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