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Conference Theme: Human-Centered Cyberphysical Systems

<http://ichms.dimes.unical.it/>

The 2020 IEEE International Conference on Human-Machine Systems (ICHMS) will be held in Rome, Italy. ICHMS will provide a remarkable opportunity for the academic and industrial communities to address new challenges and share solutions, and discuss future research directions in the important area of Human-Machines Systems. ICHMS specifically covers contributions on research related to integrated human/machine systems at multiple scales, and includes areas such as human/machine interaction; cognitive ergonomics and engineering; assistive/companion technologies; human/machine system modeling, testing and evaluation; and fundamental issues of measurement and modeling of human-centered phenomena in engineered systems. The organization of ICHMS is based on the following Track types: Conference Theme Track, Regular Track and Special Track (selected through a call). ICHMS will also feature plenary speeches, panel sessions, tutorials, workshops, PhD track and poster sessions. Contributions are expected from academia, industry, and management agencies. All accepted papers are expected to be included in IEEE Xplore.

Conference Theme Track

Human-centered Cyber-Physical Systems

Description: Cyberphysical Systems (CPS), like transport networks or large manufacturing facilities, are naturally human-centric; in fact, they are interacting with a considerable number of distributed computing elements for monitoring, control and management which can exchange information between them and notably with humans. Such complex and physically-entangled systems of systems are of crucial importance for the quality of life of the citizens and for a country economy. Human-machine systems-oriented issues arise at different levels: System, Computing and Interaction.

Topics:

- Cyber Transportation and Human Interaction in Connected and Autonomous Vehicles
- Human-centric Internet of Things: Interaction between Humans and Smart Objects
- Smart Communities living in Smart Cyber-physical Worlds: Towards Dynamic Provision of Cyberphysical Services to Human Ensembles
- Human Manipulation of Motorized Cyber-Physical Systems
- Co-existence and cooperation of Humans and Robots in Smart Environments

PAPER SUBMISSION

Complete manuscripts must be electronically submitted through the conference website:

<http://ichms.dimes.unical.it/>

Submitted manuscripts could be *Regular* (6 pages), *Short* (4 pages) or *Poster* (3 pages) papers in IEEE two-column format, including figures, tables, and references. Please use the templates at [Manuscript Templates for IEEE Conference Proceedings](#) from the conference website to prepare your paper. All submissions MUST be in PDF format.

IMPORTANT DATES

Special Track proposals deadline:	November 15, 2019
Paper submission deadline:	December 1, 2019
Notification of acceptance:	February 15, 2020
Camera-ready copy due:	March 15, 2020

Regular Tracks

Companion Technology (Leading Chair: Andreas Wendemuth): covers and combines trans-disciplinary research in fields such as computer science and artificial intelligence, cognitive science, engineering, psychology, and neurobiology.

Brain-Machine Interfaces and Systems (Leading Chair: Tiago H. Falk): includes assistive technology and research allowing locked-in individuals to communicate and control exoskeletons/devices to improve locomotion.

Human-AI Interaction and Cognitive Computing & Engineering (Leading Chairs: Changxu Wu, Yicong Zhou): encompasses human cognition in intelligent/AI system designs or/and development of AI algorithms, technology, methods for human beings.

Interactive and Wearable Computing and Systems (Leading Chairs: Min Chen, Angelika Peer): focuses on advances and developments in all aspects of interactive and/or wearable computing and systems.

Collaborative Intelligent Systems and Applications (Leading Chairs: Weiming Shen, Makoto Itoh): addresses advances on the development of scientific and engineering foundations, innovative technologies and solutions for IoT-enabled data-driven collaborative intelligent systems.

Human Factors Engineering (Leading Chairs: Nathan J McNeese, Jessie Y.C. Chen): focuses on the advancements in theory and practice related to human interaction with intelligent agents in a wide variety of environments.