



8th IEEE International Conference on Cognitive Infocommunications

Call for Papers

CogInfoCom 2017

Debrecen, Hungary

11-14th September, 2017



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Scope CogInfoCom is a new interdisciplinary field of science defined as follows:

Cognitive infocommunications (CogInfoCom) investigates the link between the research areas of infocommunications and cognitive sciences, as well as the various engineering applications which have emerged as the synergic combination of these sciences. The primary goal of CogInfoCom is to provide a systematic view of how cognitive processes can co-evolve with infocommunications devices so that the capabilities of the human brain may not only be extended through these devices, irrespective of geographical distance, but may also interact with the capabilities of any artificially cognitive system. This merging and extension of cognitive capabilities is targeted towards engineering applications in which artificial and/or natural cognitive systems are enabled to work together more effectively.

For more information on CogInfoCom please visit its official home-site at <http://www.coginfo.com.hu/conference/CogInfoCom17/>

Contributions are expected from the following areas

Human- computer combo (focusing on the complex mixture of human and artificial cognitive capabilities in human computer interaction processes; HCI, HMI, HRI)

Infocommunication-related aspects of the cognitive sciences

Artificial cognitive capabilities of infocommunication systems

Sensory substitution, sensorimotor extension, sensory augmentation

CogInfoCom channels

Socio-cognitive ICT (including any approach that uses or influences collective knowledge)

Embodied and enactive cognitive systems (based on e.g. cognitive robotics and autonomous mental development)

Cognitive biases: how biases in human perception and high-level reasoning can be put to use in system design

Cognitive control: control theoretical solutions based on or targeting cognitive and other human body related processes

Speechability (based on e.g. cognitive linguistics, verbal/non-verbal social communicative signals, speech technologies)

Augmented interaction capabilities and augmented cognition (based on e.g. multimodal interfaces)

Ethology-inspired engineering / Erorobotics

Mathability: modeling and understanding mathematical capabilities, developing artificial mathematical capabilities

Cognitive informatics and media

Ergonomics-based aspects of CogInfoCom

Cognitive networks (intelligent capabilities of cognitive networks)

Brain computer interface

Human and bio-interfaces

Affective computing

Educoaching (education through online collaborative systems and virtual reality solutions, project based education)

Cognitive data visualization

Intelligent vehicle and transportation systems (based on e.g. enhanced driver awareness, advanced driver assistance systems)

Augmented 3D capabilities (based on e.g. 3D visualization and immersive augmented/virtual interaction)

Human cognitive interfaces-virtual and real avatars (based on e.g. BCI, body area networks, virtual avatars)

Future Internet (Cognitive capabilities of e.g. Internet of Things, 3D Internet)

Virtual Reality (cognitive aspects of immersive 3D spaces, avatars)

Industrial applications of CogInfoCom (production engineering, production management etc.)

CogInfoCom based learning abilities (investigating capabilities for learning through modern informatics based education)

Face and gesture recognition

Infotation

Authors are encouraged to submit full papers describing original, previously unpublished, complete research, not currently under review by another conference or journal, addressing state-of-the-art research and developments. All papers will be reviewed and accepted papers will appear in the conference proceedings. Papers must be submitted electronically via EasyChair in IEEE format (double column A/4, 4-6 pages long).

Just like last year, publications of the 8th IEEE International Conference on Cognitive Infocommunications (CogInfoCom 2017) will be uploaded to the IEEE Xplore database upon consent of IEEE. We reserve the right to exclude any paper from the final proceedings (as well as any official database), if it is not presented at the conference.

Authors' Schedule First submission: 15 June, 2017 – **EXTENDED TO JUNE 30**

Notification of first review results: 15 July, 2017

Final submission: 5 August, 2017

Journal Publications Authors of selected best papers of the conference shall be invited to publish their previously unpublished research results in special issues of international journals.

Already registered tracks and sessions:

- **Representation of Uncertain Knowledge** / Organizer: Günther Wirsching, Ronald Römer (Brandenburg University of Technology Cottbus-Senftenberg, Germany)
- **CogInfoCom Based LearnAbility** / Organizer: Attila Kóvári (University of Dunaújváros)
- **Linguistic and Behavioural Interaction Analysis** / Organizer: Maria Koutsombogera (Trinity College Dublin, Ireland)
- **Cognitive data visualization** / Organizer: Ágoston Török (Synetiq Ltd.)

Track and Session Organizers: Those who would like to propose a track or session (a set of oral or DEMO presentations) in order to introduce the new scientific results of their fields or large scale international projects are warmly welcome. Please kindly note that the minimum number of sessions is 3 per track and 1 session is of 4 publications.