

7th IEEE Conference on Cognitive Infocommunications

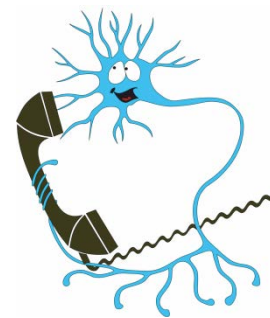
Call for Papers

CogInfoCom 2016

Wroclaw, Poland

16-17-18 October, 2016

<http://coginfocom.hu/conference/CogInfoCom16>



General Chair

Peter Baranyi, Szechenyi Istvan University, Hungary

General Co-Chairs

Ryszard Klempous, WUST, Poland

Zdenek Mikovec, CVUT, Czech Republic

Sakari Pieska, Centria UAS, Finland

Honorary Chairs

Vilmos Csanyi, MTA, Hungary

Valeria Csepe, MTA, Hungary

Tadeusz Więckowski, WUST, Poland

International Advisory Board

Zbigniew Banaszak, Koszalin Univ. of Tech. and Warsaw Univ. of Tech., Poland

Uwe M. Borghoff, Univ. der Bundeswehr München, Germany

Hassan Charaf, BME, Hungary

Anna Esposito, UNINA2/IIASS, Italy

Péter Földesi, Szechenyi Istvan University, Hungary

Tom Gedeon, ANU, Australia

Karoly Hercegfı, BME, Hungary

Andrzej Kucharski, Wroclaw Univ. of Sci. and Tech., Poland

Felix Ramos, CINVESTAV, Mexico

Pavel Slavik, CVUT, Czech Republic

Carmen Paz Suarez Araujo, ULPGC, Spain

Carl Vogel, Trinity College Dublin, Ireland

Yeung Yam, CUHK, Hong Kong

Guenther Wirsching, KU Eichstätt-Ingolstadt, Germany

Publication Chair

Gyula Sallai, BME, Hungary

Publicity Chair

Jan Nikodem, Wroclaw Univ. of Sci. and Tech., Poland

International Organizing Committee

Tamas Haidegger, Obuda University, Hungary

Peter Kadar, Obuda University, Hungary

Levente Kovacs, Obuda University, Hungary

Krzysztof R. Kozłowski, Poznan Univ. of Technology, Poland

Rita Lovassy, Obuda University, Hungary

Kamil Staniec, Wroclaw Univ. of Sci. and Tech., Poland

Ryszard Zielinski, Wroclaw Univ. of Sci. and Tech., Poland

Local Organizing Committee Chair

Jan Nikodem, Wroclaw Univ. of Sci. and Tech., Poland

Local Organizing Committee

Beata Andrasz, Wroclaw Univ. of Sci. and Tech., Poland

Michal Kowal, Wroclaw Univ. of Sci. and Tech., Poland

Slawomir Kubal, Wroclaw Univ. of Sci. and Tech., Poland

Piotr Piotrowski, Wroclaw Univ. of Sci. and Tech., Poland

Iga Wasowicz, Wroclaw Univ. of Sci. and Tech., Poland

Local Organizing Student Committee

Konrad Kluwak, Wroclaw Univ. of Sci. and Tech., Poland

Pawel Szczesny, Wroclaw Univ. of Sci. and Tech., Poland

Industrial Relations Chair

Peter Galambos, Obuda University, Hungary

Secretary General

Anna Szemereki, Szechenyi University, Hungary

Financial Chair

Aniko Szakal, IEEE Hungary Section, Hungary

Conference Assistant

Varga Csilla, MTA SZTAKI, Hungary

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 www.coginfocom.hu.

Contributions are expected from the following areas

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 in CogInfoCom: how biases in human perception and high-level reasoning can be put to use in CogInfoCom systems

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

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

Ergonomics-based aspects of CogInfoCom

Avatar ergonomics

Human-car interactions

CogInfoCom channels (based on e.g. sensory substitution, sensorimotor extension)

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 and virtual avatars)

Ethology-inspired engineering / Etho-robotics

Mathability: modeling and understanding mathematical capabilities

Cognitive informatics and media

Future Internet (CogInfoCom aspects of e.g. Internet of Things, 3D Internet)

Cognitive networks of cars

Intelligent car informatics

Infocommunication-related aspects of the cognitive sciences

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)

Interaction capabilities of CogInfoCom systems (based on e.g. HCI, HMI and HRI)

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

Cognitive capabilities of Future Internet

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 7th IEEE International Conference on Cognitive Infocommunications (CogInfoCom 2016) 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 July, 2016 - EXTENDED

Notification of first review results: **15 August, 2016**

Final submission: **5 September, 2016**

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*.

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.

Already registered tracks and sessions:

- **Accessibility of CogInfoCom Systems** / Organizer: Zdenek Mikovec (CVUT, Czech Republic)
- **Application of Robotics in Health Care** / Organizer: Piotr Sauer (Poznan University of Technology, Poland)
- **CogInfoCom Aided Engineering** / Organizers: Joni Jamsa, Sakari Pieska (Centria UAS, Finland)
- **Cognitive Factors in Transport Planning** / Organizer: Csaba Koren (Szechenyi Istvan University, Hungary)
- **Linguistic and Behavioural Interaction Analysis** / Organizers: Anna Esposito (UNINA2/IIASS, Italy), Carl Vogel (Trinity College Dublin, Ireland)
- **Mathability** / Organizer: Attila Gilanyi (University of Debrecen, Hungary), Peter Baranyi (Szechenyi Istvan University, Hungary)
- **SocioCognitive-ICT** / Organizer: Bertalan Forstner (Budapest University of Technology and Economics, Hungary)

Organizers: Wroclaw University of Science and Technology, Szechenyi Istvan University, BME

Sponsors: IEEE Hungary Section; IEEE SMC, CIS and RAS Chapters (Hungary)

Technical Co-sponsors: IEEE Poland Section, IEEE CIS Chapter and IEEE RAS Chapter (Poland)

Contact address: coginfocom2016@sztaki.mta.hu

Technical Program Committee Chair

Technical Program Committee Co-Chair

Agoston Torok, RCNS HAS & Syntetiq Ltd.

Technical Program Committee

Michael Affenzeller, FHOÖ, Austria

Artur Bak, PJAiT, Poland

Jan Balata, CVUT, Czech Republic

Stefan Benus, UKF, Slovakia

Manuel Berenguel, Univ. of Almeria, Spain

Grzegorz Bocewicz, KUT, Poland

Istvan Boda, University of Debrecen, Hungary

Janos Botzheim, Tokyo Met. University, Jap---

Zenon Chaczko, UTS, Australia

Hassan Charaf, BME Hungary

Adam Csapo, MTA SZTAKI, SZE, Hungary

Heinz Dobler, FHOÖ, Austria

Péter Földesi, SZE, Hungary

Wai-Keung Fung, RGU, United Kingdom

Bassam Haddad, University of Petra, Jordan

Marjo Heikkilä, Centria UAS, Finland

Karoly Hercegfı, BME, Hungary

Atsushi Ito, Utsunomiya University, Japan

Joni Jamsa, Centria UAS, Finland

Jerzy F. Kotowski, WUST, Poland

Maria Koutsombogera, ILSP-ATHENAR.C., Greece

Szilveszter Kovacs, Miskolc University, Hungary

Julita Kulbacka, Wroclaw Medical University, Poland

Marek Kulbacki, PJAiT, Poland

Mika Luimula, TUAS, Finland

Miroslav Macik, CVUT, Czech Republic

Gabor Magyar, BME, Hungary

Adam Miklosi, ELTE, Hungary

Frederic Noel, G-SCOP, Univ Grenoble-Alpes, France

Stanislav Ondas, TUKE, Slovakia

Harris Papageorgiou, ILSP, Athens RC, Greece

Claudiu Pozna, Brasov University, Romania

Radu-Emil Precup, PUT, Romania

Ewaryst Rafajłowicz, WUST, Poland

Francisco Rodríguez Diaz, Univ. of Almeria, Spain

Piotr Sauer, Poznan University of Technology, Poland

Jakub Segen, PJAiT, Poland

Ewa Skubalska-Rafajłowicz, WUST, Poland

Czeslaw Smutnicki, WUST, Poland

Ewa Szlachcic, WUST, Poland

Jouni Tervonen, University of Oulu, Finland

Erzsébet Toth, University of Debrecen, Hungary

Klara Vicsi, BME, Hungary

Yeung Yam, CUHK, Hong Kong

Marianna Zichar, University of Debrecen, Hungary



7th IEEE Conference on Cognitive Infocommunications

Call for Demonstration

~ A venue for science, future professionals and industry representatives to meet ~

The 7th IEEE CogInfoCom 2016 organizing committee invites proposals for demonstrations to be given at the conference.

The demonstrations provide a forum for researchers as well as industry participants to demonstrate working systems, applications, tools or showcases of basic technologies to the conference attendees. The goal of the demonstrations is to showcase a spectrum of applications ranging from research prototypes to pilot solutions and even products that use cognitive infocommunications technology and provide functionality in the context of cognitive learning and information technology. For submissions to this event, it is very important to describe the demonstration setup, functionality and benefit to the viewer of the demonstration. Technical background discussion can be presented at the actual demonstration or can be submitted as an industry track or regular conference paper; the focus of the demonstrations themselves should be to show the functionality to viewers. Demonstrations are expected to be highly interactive.

Topics for demonstrations include but are not limited to:

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 in CogInfoCom: how biases in human perception and high-level reasoning can be put to use in CogInfoCom systems

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

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

Ergonomics-based aspects of CogInfoCom

Human-car interactions

CogInfoCom channels (based on e.g. sensory substitution, sensorimotor extension)

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 and virtual avatars)

Ethology-inspired engineering / Etho-robotics

Mathability: modeling and understanding mathematical capabilities

Cognitive informatics and media

Future Internet (CogInfoCom aspects of e.g. Internet of Things, 3D Internet)

Intelligent car informatics

Infocommunication-related aspects of the cognitive sciences

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)

Interaction capabilities of CogInfoCom systems (based on e.g. HCI, HMI and HRI)

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

Cognitive capabilities of Future Internet

Cognitive networks of cars

Demonstrations ideally showcase a system or application that clearly underlines the benefit of using and deploying cognitive infocommunications technologies. In addition, tools and basic technologies that implement or use cognitive infocommunications or cognitive infocommunications approaches are invited for demonstration. *Any devices or hardware/software developments which build on, take into account and/or enable interaction between various levels of natural/artificial cognitive capabilities are welcome!*

Demonstration Setup

The demonstrations are planned to be a single event during the conference, open to all conference attendees, with the goal of open and constructive discussions. One table will be provided with power as well as Internet connection. Posters can be displayed behind or next to the tables (depending on the space) either on pin boards or the wall. Demonstrators must bring any additional equipment they require as no equipment will be provided by the conference.

Demonstration Submissions

Authors submitting papers to the demonstrations must submit a maximum 2-page paper that clearly outlines the demonstration that will be set up and the functionality a visitor to the demonstration can observe. The technical background, such as the architecture or algorithms, should not be described in detail; such a description would best be submitted to the industry track or main conference paper track. Including links to supporting material, e.g. a video on the web or a web-based demo itself, is highly encouraged. All submissions must follow the specific submission guidelines on the COGINFOCOM2016 web page. The accepted demonstration submissions will be included in the conference proceedings. **Please kindly indicate the intention of your DEMO participation via e-mail at your earliest convenience in order to help the organization of the event. Please include "[COGINFOCOM2016-DEMO]" in the subject of your emails and send them to coginfocom2016@sztaki.mta.hu.**

Important Dates

Demo Submission: **1 July, 2016**

Notification: 15 August, 2016

Final submission: 5 September, 2016

Conference: 16-17-18 October, 2016 in Wroclaw, Poland

Submissions

Researchers and practitioners are invited to submit demo proposals to the demo co-chairs: to be decided

Note:

Every demo paper accepted for publication in the Proceedings of 7th IEEE Intl' CogInfoCom 2016 MUST be presented during the conference.