

2nd CALL FOR PAPERS

Regular paper submission deadline	June 20, 2016
Invited paper/special session submission deadline	June 20, 2016
Authors notifications	July 20, 2016
Final paper submission	August 15, 2016

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Welcome to CPHS 2016!

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It is a great pleasure for the CPHS 2016 Organizing Committee to invite you to participate in the **1st IFAC Conference on Cyber-Physical&Human-Systems, CPHS 2016** (<http://www.cphs2016.org>) will be held in Florianopolis, Brazil, 7-9 December, 2016, under the auspices of IFAC, the International Federation of Automatic Control.

The interplay of humans with highly automated systems with complex dynamics and complex controllers or the design of complex control systems to assist the humans need a deep study that requires multidisciplinary joint efforts. In CPHS 2016, different application areas (healthcare, robotics, operation in hazardous environments, transport - ground (automotive, railway), air, space, etc) are considered, according to four scenarios:

1. Human-Machine Symbiosis
2. Humans as operators of complex engineering systems
3. Humans as agents in multi-agent systems
4. Humans as elements in controlled systems

Plenary Lectures

[Homayoon Kazerooni](#)

University of California at Berkeley, US

New developments on lower extremity exoskeleton systems

[Franck Mars](#)

IRCCyN - Ecole Centrale de Nantes, France

A cybernetic driver model to support steering control assistance and distraction monitoring

[Bérénice Mettler](#)

University of Minnesota, US

Where humans and machines meet: systematic modeling of human-machine systems

[Gérard Roucairol](#)

Académie des Technologies, France

Chevalier de la Légion d'honneur, Chevalier de l'ordre national du Mérite

Digital infrastructure evolution: breakthroughs, challenges and impacts on society

[Petr Stluka](#)

Honeywell, Prague, Czech Republic

New challenges for advanced control in connected buildings

SUBMISSION

Paper Submission

All manuscripts Proposals must be electronically submitted through the [PaperPlaza Conference Manuscript Management System](#). Guidelines for the preparation of manuscripts are provided on the [IFAC website](#). Authors are advised to read PaperCept's [Getting Started Manual](#) for Authors. Only PDF files compliant with the IFAC Publications Requirements are acceptable for publication. The procedure to generate pdf files and compliance and diagnostic tools are provided in the support section of PaperCept.

All papers will be accepted with the understanding that the authors will present them at the CPHS Conference. At least one author of every accepted paper will be required to register for the conference before uploading the final version.

Submission Guidelines

All submitted contributions must be written in English and comply with the IFAC format, detailed in the instructions on the website. Submissions should be made in PDF format, and are limited to 6 pages. The selected scientific contributions will be in the form of oral or poster presentations. Tutorials, Review and Vision papers are very welcome.

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TOPICS

In CPHS 2016, different application areas (healthcare, robotics, operation in hazardous environments, transport - ground (automotive, railway), air, space, etc) are considered, according to four scenarios, as follows :

1. Human-Machine Symbiosis

- Smart prosthetics
- Neurostimulation
- Exoskeletons
- Biomedical implants

2. Humans as operators of complex engineering systems

- Aircraft control, Human-Machine interaction in aircraft
- Automotive cooperated control (ADAS, etc)
- Process plant operation
- Robotic surgery
- Spacecraft control
- Control in hazardous environments
- Automated or semi-automated trains
- Remote operation of robotic teams e.g. in rescue scenarios

3. Humans as agents in multi-agent systems

- Intelligent road transportation
- Next-generation air traffic management
- Flexible manufacturing
- Assistive robotics
- Smart Grid and Demand Response
- Urban mobility

4. Humans as elements in controlled systems

- Comfort control in homes
- Smart cities
- Rescue robotics
- Assistive devices
- Smart infrastructure
- Connected buildings

And in all the above topics:

- Recent theoretical developments impacting the open problems
- Semiautonomous and mixed-initiative systems
- Shared control
- Cognitive control
- Decision-support for human operators
- Ethics and public policy
- Potential impact and open problems, ...

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Conference Website :
<http://www.cphs2016.org>

Contact : CPHumSys2016@gmail.com