

# Automation, Robotics & Communications for Industry 4.0 (ARCI): 1<sup>st</sup> IFSA Winter Conference



**3-5 February 2021** Chamonix-Mont-Blanc, France

<https://arci-conference.com/>

## About the Event

According to the modern market study, the global Industry 4.0 market will reach US\$ 155.30 Billion by 2024 growing at the CAGR of 14.9% between 2018 and 2024. The Industry 4.0 is an integrated system, which consists of an automation tool, robotic control, communications and big data analytics. The Industry 4.0 holds a lot of potentials and is expected to register a substantial growth in the near future. There are several conferences on automation, robotics and communications, but they are not meet the Industry 4.0 challenges. The series of annual ARCI Winter IFSA conferences have been launched to fill-in this gap and provide a forum for open discussion of state-of-the-art technologies related to control, automation, robotics and communication - three main components of Industry 4.0.

The ARCI' 2021 conference will incorporate three symposiums covering research and development in a broaden range in automation, robotics and communication, and united by the Industry 4.0 challenges. However it will be not a conference only about the future concepts and new visions. It will be also to discuss how to adopt the current R&D results for Industry 4.0 and to customize products under the conditions of highly flexible (mass-) production. The ARCI' 2021 conference is organized by the IFSA - one of the major professional, non-profit association serving for sensor industry and academy more than 20 years.

## Industry 4.0:

- Design principles in Industry 4.0
- Industrial Big Data and Analytics
- Industrial Internet of Things (IoT)
- Smart Manufacturing and Technologies
- Smart Factories
- Smart Devices and Products
- Cyber-physical Systems
- Cloud Computing and Manufacturing
- Machine Learning and Artificial Intelligence in Manufacturing
- Digital Production and Virtual Engineering
- Soft Measurements

## Automation:

- Automatic Control, Theory and Applications
- Linear/Nonlinear/Adaptive/Robust/Optimal Control
- Control Devices and Instruments
- Components and Technologies for Control
- Programmable Logic Controllers (PLC)
- Control System Modeling and Simulation
- Fuzzy-logic and Artificial Neural Networks in Control Systems
- Emerging Trends in Automation and Control Industry
- Industrial Automation and Control
- Manufacturing Systems and Automation
- Process Automation
- Process Control and Monitoring
- Optimal Control
- Telematics
- CAD / CAM / CIM / SCADA
- Computers for Control
- Computational Intelligence in Control
- Information Control in Manufacturing
- Intelligent Traffic Control
- Chemical Process Control
- Control in Agriculture Biological and Medical Systems
- Modeling and Control of Environmental Systems
- Artificial Intelligence for Cyber-Physical Systems in Automation
- Machine Learning in Control Applications
- Education and Training in Automatic Control and Systems

## Robotics:

- Industrial Robots
- Soft Robots

- Biorobotics and Medical Robots
- Sensors for Robots
- Mobile Robots
- Humanoid Robots
- Human-Robot Interaction
- Rehabilitation robotics
- Intelligent Robots & Systems
- Mechatronic Systems
- Multimodality Human-machine Interaction
- Robot Control and Learning
- Cognitive Approach for Robotics
- Flexible Automation
- Emerging Trends in Robotics Industry
- Autonomous Systems and Drones
- Robots for Space Exploration
- Robotics in Defense
- Underwater Robots
- Network Robotics & Telerobotics
- Nanorobotics

## Communications:

- Industrial Communication Technologies and Systems
- Emerging Trends in Communication Industry
- Industrial Networks and Automation
- Real-Time and Networked Embedded Systems
- Network Control and Security
- Web-enabled Manufacturing Control and Wireless Automation
- Wireless Sensor Networks for Robot Navigation
- Distributed Networks
- Network Architectures and Protocols
- Intelligent Network Components
- Next Generation Networks
- Communication Theory, Protocols and Signal Processing
- Telecommunications, Telemetry and Telecontrol
- Digital Telecommunications
- Telecommunications in Smart Cities
- Wireless and Mobile Communications
- 4G and 5G Mobile Communications Services
- Satellite and Space Communications
- Global Navigation Satellites Systems
- Sensor, Mesh, and Ad hoc Networks
- Underwater Sensor Networks
- Radio Communications Systems
- Energy Harvesting and Power Management Communication



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## Contribution Types:

- Keynote presentations
- Invited presentations
- Special sessions
- Regular sessions
- Poster sessions
- Industrial presentations
- Panel discussions and Round tables
- Exhibition

## Organising Committee

### Chairman:

Prof., Dr. Sergey Y. Yurish (IFSA, Spain)

### Advisory Chairman:

Prof., Dr. Vijayakumar Varadarajan (The University of New South Wales, Australia)

### Conference and Publication Manager:

Mrs. Tetyana Zakharchenko  
(IFSA Publishing, S. L., Spain)

### Organizing Committee:

Mr. Javier Cañete (Universitat Politècnica de Catalunya (UPC), Barcelona, Spain)  
Mr. Luis Morey (Universitat Politècnica de Catalunya (UPC), Barcelona, Spain)  
Mr. Sergey Garmash (IFSA Publishing, S. L., Spain)

## Deadlines:

Submission (2-page abstract):  
Notification of acceptance:  
Registration:  
Camera ready (4-6 pages paper):

**5 November 2020**  
**5 December 2020**  
**30 December 2020**  
**15 January 2021**

## One event - three publications !

- 1) All registered abstracts will be published in the conference proceedings (USB flash drive edition of published Proceedings with the ISBN), distributed during the conference and submitted for indexing to the Conference Proceedings Citation Index (CPCI) by Clarivate Analytics (former Thomson Reuters).
- 2) Authors will be invited to submit full-page extended papers to the special issue of Sensors & Transducers open access journal (ISSN 2306-8515, e-ISSN 1726-5479) for free of charge or other journals.
- 3) The limited number of full-page papers published in the journal will be selected by the Editorial Board to extend for book chapters for the open access Book Series on 'Advances in Robotics and Automatic Control: Reviews', Vol. 2 or 'Advances in Networks, Security and Communications: Reviews', Vol. 3. Both books will be submitted to the Book Citation Index by Clarivate Analytics.



## Social Events:

- Welcome 'Cheese & Wine party'
- Gala Dinner
- Excursions

