# IFAC
## INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL

## IMS 2019
### Intelligent Manufacturing Systems

13th IFAC Workshop on
Intelligent Manufacturing Systems
Oshawa, Ontaio, Canada, 12-14 August 2019

## Sponsored by: IFAC TC 5.1 - Manufacturing Plant Control
## Co-sponsored by: IFAC TC 4.2, 4.3, 5.2 and 5.3



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It is with our pleasure to invite you to participate in the 13th IFAC Workshop on Intelligent Manufacturing Systems (IMS 2019), which will be held in Oshawa, Ontario, Canada, on 12-14 August 2019, organized by University of Ontario Institute of Technology (UOIT).
The City of Oshawa is the largest municipality in the Region of Durham in the Greater Toronto Area located about 50 km east of Toronto downtown on Lake Ontario. It is commonly viewed as the eastern anchor of the Greater Toronto Area and of the Golden Horseshoe. Oshawa's roots are tied to the automobile and nuclear industries. UOIT is a modern and innovative university with strong technology focus in its both, contents and the methods of education.

**IMS 2019** will bring together researchers and experts from industry and academia to give an overview of the state-of-art, to present new research results and to exchange ideas and experiences in the field of intelligent manufacturing systems.

This event will have specific attention to the latest innovations, on-going efforts and the best practices in experiencing the Industry 4.0 era, smart factory and its cyber-physical systems, intelligent inspection to monitor the manufacturing health, and on-demand and customized manufacturing with additive. Participants will identify new initiatives, applications, and research advances in the Intelligent Manufacturing Systems, and demonstrate the ready-to-deploy technologies. There will be numerous opportunities for networking and discussing the collaborative opportunities.

### Paper Publication
Accepted papers that have been presented at an IFAC meeting will be published in the proceedings of the event using the open access IFAC-PapersOnLine series hosted on ScienceDirect (http://www.sciencedirect.com). Journal of Intelligent Manufacturing (JIM), Engineering Applications of Artificial Intelligence (EAAI), IFAC Journal of systems and Control and other journals from IFAC will select papers for post-conference publications.

### Invited sessions
Proposals for invited Sessions for IMS 2019 are welcome.

### Paper awards
Best Paper Award, Industrial Paper Award, and Best Student Paper Award will be selected by the peer review team.

### Important Dates
| | |
|---|---|
| March 15, 2019 | Deadline for invited sessions proposal |
| March 03, 2019 | Deadline for proposal special sessions |
| April 30, 2019 | Deadline for submission of papers |
| June 06, 2019 | Notification of papers acceptance/rejection |
| June 15, 2019 | Final papers submission |
| August 12-14, 2019 | Workshop IMS 2019 |

## Contact:
Contact@IFACIMS2019.com          http://www.ifacims2019.com

## Meeting Topics

The workshop covers all theoretical and application oriented aspects of intelligent manufacturing systems. The list of topics includes but is not limited to:
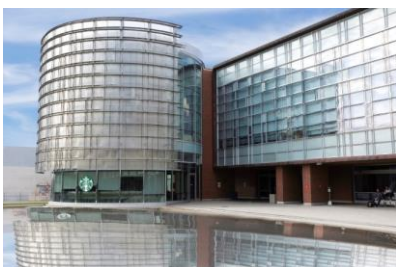
- Intelligent support systems for manufacturing decision making
- Smart quality assurance and intelligent inspection
- Smart maintenance with predictive and prescriptive capabilities
- Augmented reality for operator assistance
- Cobots and innovative robotic technologies and their implementations in shop floors
- Artificial intelligence for manufacturing processes
- Vision systems for manufacturing processes
- Big data analytics for manufacturing systems & processes
- Machine learning for manufacturing processes
- Fusion of sensor information for manufacturing processes
- Additive manufacturing technologies for on-demand production and personalized products
- Digital twins for decision making in Industry 4.0 era
- Virtualization and simulation techniques for manufacturing decision making
- Bio-inspired manufacturing, theory of complexity, swarm intelligence, and self-adaptation
- Self configuration and self diagnosis IoT methods for manufacturing shop floors
- Self optimization models for scheduling and sequencing manufacturing shop floor
- Blockchain technology, resource efficiency and circular economy tracking in Industry 4.0
- Autonomy, autonomous vehicles, and drones
- Control algorithms for smart part logistics
- Self organizing systems and emergent behavior
- Novel industrial case studies to examine the implementation of "Digital Manufacturing"

## Paper Submission

All publication material submitted for presentation at an IFAC-sponsored meeting (Congress, Symposium, Conference, Workshop) must be original and hence cannot be already published, nor can it be under review elsewhere. The authors take responsibility for the material that has been submitted. The paper are limited to 6 pages in the standard two-column IFAC proceedings format. IFAC-sponsored conferences will abide by the highest standard of ethical behavior in the review process as explained on the Elsevier webpage (https://www.elsevier.com/authors/journal-authors/policies-and-ethics), and the authors will abide by the IFAC publication ethics guidelines (http://www.ifac-control.org/events/organizers-guide/PublicationEthicsGuidelines.pdf/view).

**Contact:**
Contact@IFACIMS2019.com

## Registration Fee

| | Early bird registration (before 30.06.2019) | Late registration (after 30.06.2019) |
|---|---|---|
| Regular | 490 Euro | 570 Euro |
| Student | 320 Euro | 390 Euro |

http://www.ifacims2019.com