Open Invited Track: Industry 4.0 applications of Machine Learning and Intelligent Control - Code for submitting contributions: 6ju15

Seán McLoone, Queen's University Belfast, Northern Ireland, s.mcloone@qub.ac.uk
Gian Antonio Susto, University of Padova, Italy, gianantonio.susto@dei.unipd.it

The constantly increasing availability of data, the rapid expansion in computational and storage capacities of IT systems, and algorithmic advances in Machine Learning, AI and Intelligent Control, are beginning to have a huge impact in many areas of science and engineering. Breakthroughs in Deep Learning, in particular, have led to major advances in Computer Vision and Natural Language Processing over the last decade. Coupled with the developments in the Internet of Things (IoT), these technologies are transforming many sectors of our society, and are at the heart of the envisaged transformation of industry -- the so-called fourth industrial revolution (Industry 4.0).

The objective of this Open Track is to showcase real-world applications and algorithmic advancements of Machine Learning and Intelligent Control that are designed to solve the problems faced by data scientists and researchers when moving from proof-of-concept studies to productive Industry 4.0 solutions. We are particularly interested in contributions from industrial practitioners who may find the option of extended abstracts (2-4 pages) an attractive submission format[1].

We invite contributions that are based on (but not limited to) the following methodological sectors:
- Parsimonious and robust Machine Learning approaches;
- Deep Learning;
- Machine Learning and Control;
- Machine Learning approaches for sequence learning tasks;
- Reinforcement Learning;
- Computer Vision;
- Natural Language Processing;
- Learning and system identification.

Application areas include flexible automation and robotic systems, human robot collaboration, predictive maintenance, anomaly detection, soft sensing, and autonomous inspection systems.

Important Dates:

31 October 2019 Draft manuscript submission http://ifac.papercept.net

February 2020 Notification of acceptance

12-17 July 2020 Conference in Berlin https://www.ifac2020.org

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[1] Contributions to open invited tracks can be either regular papers (6-8 pages in length) or Extended abstracts (short paper of 2-4 pages in length, they will not be published in IFAC PapersOnLine, but will appear in the congress preprints)