

MIM ON MANUFACTURING MODELING MANAGEMENT & CONTROL

10th International Federation of Automatic Control (IFAC) Conference

New challenges for management and control in the Industrie 4.0 era

June 22-24, 2022, Nantes, France

Special Session

Risk and resilience in the era of Industry 4.0

Organizers:

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The acceleration of the socio-economic environment, induced by uncontrolled globalization and accompanied by uninterrupted transformations and uncertainties, is leading industrial systems to be more agile and more innovative.

Nevertheless, the change remains a relatively mild exercise since it goes hand in hand with several internal risks (technical problems, delays in the realization of the tasks and the deliveries, lack of human resources, time or interest by the users ...) and external (budgets cut, bankruptcy of a supplier, retirement of certain key people, emergence of a new, more efficient technology, remarkable innovation from a competitor, etc.).

According to (Hollnagel et al., 2013), resilience is the ability to recognize and adapt to deal with unforeseen disruptions that challenge the competence model and require a shift in processes, strategies, and coordination. Improving resilience is not reduced simply to improving safety, but, beyond that, it goes as far as the general improvement of the

system's performance on all levels: individual performance, collective performance or organizational performance.

Industry 4.0 represents a radical change in the way in which companies envisage and apply technology in each sphere of their operations and allows for considerable gains in terms of efficiency and performance. However, the story does not end there.

The implementation of these technologies can generate risks or opportunities for the company. Indeed, the implementation of Industry 4.0 has shown that the connections between humans, systems and objects have become a more complex, dynamic and optimized network in real-time. On the other hand, the increase in the volume and availability of real-time data leads to new requirements in infrastructure, management, technologies, etc.

This session aims to share the most recent contributions in this area. Researchers and professionals are invited to present their work in the following or related fields:

- Risk Assessment and Safety 4.0
- Industry 4.0
- Resilience
- Modeling and Simulation

Keywords: Resilience, Industry 4.0, risk, decision support system, risk and opportunities, modeling and simulation.

Submission:

For author guidelines, please refer to <https://ifac.papercept.net/conferences/scripts/start.pl>. All papers must be submitted electronically using Symposium Manuscript Management System (CMMS). All papers must be prepared in a two-column format in accordance with the IFAC manuscript style. Please use the official IFAC instructions and template to prepare your contribution as a full-length draft paper and submit it online by December 25, 2021. Submission details are available on the symposium website. All submissions must be written in English. All papers that conform to submission guidelines will be peer-reviewed by IPC members. The corresponding author submits the paper online (pdf format) as **an invited session paper**. Submission as an invited paper requires the **invited session code xxxxx**. Several international journals are associated with the MIM 2022 for the publication of special issues.

Deadline Submission : 25/12/2021