



12th International Workshop on Service Oriented, Holonic and Multi-Agent Manufacturing Systems for Industry of the Future - SOHOMA'22

September 22 -23, 2022

Session title: Performance, ethics and operations management in internal logistics 4.0

Organisers:

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Short presentation:

Internal logistics activities, namely material handling tasks in industry, are of primary importance in companies' success. In many domains these tasks are intensively performed by operators and poorly assisted by technologies. Nevertheless, in the framework of Industry 4.0 development, numerous technologies are nowadays introduced to support material handling, in particular Autonomous Mobile Robots, Cobots, Real-Time Location Systems or Assistive picking devices (augmented reality glasses, voice picking devices, tablets ...).

The transition to the use of these technologies raises many questions for the internal logistics system that are characterised by a deep interrelation between humans and cyber-physical systems. For example, the adequate technologies must be selected adopting a wide stare on the business case. New monitoring and control algorithms must be defined to take advantage of technologies' promises. Ethical stakes are arising from this modification in human system interaction and in the new definition of the working positions. The way of analysing the whole systems performance may also be redefined to comprehend its complete behaviour.

In this special session we are interested in discussing all the aspects of internal logistics 4.0: selection of equipment, deployment of new technologies, performance analysis, operations management in material handling 4.0, and ethical analysis of material handling systems.

Keywords: Internal Logistics, Industry 4.0, Ethics, Performance analysis of production systems, Material Handling, Material Handling system design.

Important dates:

- Full paper submission: **July 8, 2022**
- Notification of acceptance: **August 1, 2022**
- Final, camera-ready paper submission: **September 1, 2022**
- Early registration and fee payment: **September 1, 2022**
- Workshop: **September 22 – 23, 2022**