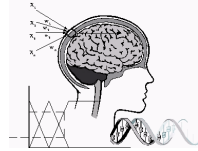




# International

*Innovation in Knowledge Based and Intelligent  
Engineering Systems*



## INVITED SESSION SUMMARY

### Title of Session:

Design and management of advanced production systems in the Industry 4.0 era

### Name, Title and Affiliation of Chairs:

#### ***Dr. Marco Bortolini, Ph.D.***

Researcher and Assistant Professor  
Department of Industrial Engineering  
Alma Mater Studiorum – University of Bologna, Italy

#### ***Dr. Lucia Botti, Ph.D.***

Researcher and Assistant Professor  
Interdepartmental Research Center on Security and Safety  
University of Modena and Reggio Emilia, Italy

#### ***Dr. Francesco Gabriele Galizia, M.D.***

Junior Researcher  
Department of Industrial Engineering  
Alma Mater Studiorum – University of Bologna, Italy

### Details of Session (including aim and scope):

In the last years, companies are facing radical changes forcing to improve their standard in product and process design and management. High flexibility, dynamic market demand, increasing customization, high-quality products, flexible batches and short product life cycles are among the key factors affecting the modern industrial and market context and characterizing the emerging Industry 4.0 era. Companies are asked to implement effective and advanced production and inbound logistic solutions to best manage the above-mentioned factors.

The aim of this Invited Session is to attract contributions from Academics and Industrial Practitioners dealing with the design and management of next generation production and inbound logistic systems in the framework of the Industry 4.0 era. Reviews, original models and quantitative methods, technologies, management techniques and disruptive approaches are welcomed as well as industrial case studies and experiences from the field.

Relevant topics include, but are not limited to:

- Design and management of reconfigurable manufacturing and assembly systems;

- Digital manufacturing and digital-twins;
- Human-Automation interaction in production systems;
- Design and management of Smart and Learning Factories;
- Design and management of advanced storage systems;
- Advanced models and solutions for inbound logistics and material handling;
- Machine learning and artificial intelligence techniques for manufacturing;
- Self-adaptive and self-learning production systems.

**Main Contributing Researchers / Research Centres (tentative, if known at this stage):**

Researchers and Professors from Bologna, Modena and Reggio Emilia, Padua and Trento Industrial Systems Engineering research groups;

Researchers and Professors from the Italian Academic Industrial Plant Association (tentative);

Researcher and Professors from Universities of Marseille, Wuppertal, Aalborg and Maribor (tentative);

Researchers from Interdepartmental Centres for Industrial and Applied Research (tentative);

Managers and Practitioners from SMEs and large-scale industries.

**Website URL of Call for Papers (if any):**

Dedicate positions on:

<https://www.unibo.it/sitoweb/marco.bortolini3/en>

<https://personale.unimore.it/rubrica/dettaglio/luciabotti>

<https://www.unibo.it/sitoweb/francesco.galizia3/en>

<http://www.industrial-engineering.unibo.it/en>

<http://safetyengineering.din.unibo.it/en/>

and dedicated messages to researchers and practitioners mailing lists.

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