Session title: Human factors integration in Industry 4.0

Organisers:

- Sondès CHAABANE, LAMIH UMR CNRS 8201, Université Polytechnique Hauts-de-France, France (sondes.chaabane@uphf.fr)
- Ioana BILEGAN, LAMIH UMR CNRS 8201, Université Polytechnique Hauts-de-France, France (ioana.bilegan@uphf.fr)
- Inês MARQUES, Centre for Management Studies, Instituto Superior Técnico, Universidade de Lisboa, Portugal (ines.marques.p@tecnico.ulisboa.pt)

Short presentation:

Industry 4.0 is the new paradigm in manufacturing industry, covering the entire value chain, from the resource provider up to the final user. Existing research in this area mainly focuses on system technology, however, human factor aspects seem not to be considered appropriately. Humans in manufacturing and service systems are involved everywhere: at one end, as decision-makers, managers, workers, and at the other end, within our society, as customers. Industry 4.0 must ensure that all employees take advantage of digital and technological transformations, and thus integrate human factors in decision-making processes meant to improve working conditions.

This session aims to investigate innovative human-centred approaches for the integration of human factors in system design, the optimization of human resource organization, or improving working conditions, reducing musculoskeletal disorder risks, etc. This session is seeking contributions such as: literature reviews, interdisciplinary approaches, critical analyses and comparisons, simulation studies, etc. The work presented may be issued from very early stages of case-studies or even theoretical research with a potential to be applied to this type of problems. Topics may include: staff-scheduling problems, ergonomics in operations and logistics, decision-making in human resource planning, impact of demographic changes on manpower in industrial systems, impact of technology on human work, etc.

This session aims to act as a forum for emerging interdisciplinary research relevant to human factors integration and organization and its applications in the Industry 4.0 context.

Keywords: human factors, Industry 4.0, ergonomics, staff-scheduling, human resource planning, multi-agent systems, simulation, optimization

Important dates:
- Full paper submission: **April 24, 2019**
- Notification of acceptance: **May 18, 2019**
- Final, camera-ready paper submission: **June 13, 2019**