Special Session on
Education and enabling tools of Industry 4.0 for a connected world

Scope

The enabling technologies of Industry 4.0 (I4.0) allow unprecedented connection opportunities, not only horizontally among the machines and tools of the manufacturing systems, but also vertically among the company functional areas and outside the company among the socio-economic system that is at various levels involved in the digital transformation of the factories. Horizontal and vertical integration constitute, from all points of view, a collaborative network.

While most of the digital technologies applied in I4.0 are nowadays mature and consolidated, their application inside a factory requires consistent organizing, innovation and cognitive effort to the people involved. Cognitive effort can be largely supported, reduced and made more accessible by adopting a collaborative approach to the learning process: participative learning, wisdom of the crowd, learning in a Social Network, Massive Open Online Courses, etc.

The Special Session addresses the many issues encountered to introduce I4.0 in factory: how modern education methods and digital technologies can assist the implementation of I4.0 enabling tools in the manufacturing systems, in supply chains, as well as in single enterprises or even in a single manufacturing process. The aim of the Special Session is to provide an international forum for the dissemination and exchange of scientific information on design and application of modern technologies that can be applied in education to prepare students for work in Factories of the Future and what solutions can be introduced to improve the connectivity and the decision-making process.

Topics of interest include but are not limited to:
- Vertical system integration
- Horizontal system integration
- Cyber Physical Systems
- Simulations of manufacturing systems
- Computer aided systems in enterprises
- Virtual reality
- Digital twins
- Autonomous robots
- Human-robot collaboration
- Decision making process based on stream data in real time
- Big data
- E-learning
- Internet of Things
- Value chain management

Session Organizers:
- Dorota Stadnicka – Rzeszow University of Technology, dorota.stadnicka@prz.edu.pl
- Doriana D'Addona – University of Naples Federico II, daddona@unina.it
- Dario Antonelli – Politecnico di Torino, dario.antonelli@polito.it

Submission procedure: Papers accepted for this session are included in the PRO-VE 2019 conference proceedings and follow the same reviewing process.

Important dates:
- Abstracts: 17 Mar 2019
- Full paper: 07 Apr 2019
- Acceptance notification: 18 May 2019
- Camera ready: 28 May 2019

Acceptance of papers is based on the full paper (up to 8 pages). Each paper will be evaluated by three members of the International Program Committee. However, prospective authors should submit a short abstract in advance, in order to check if the proposed topic fits within the conference scope.

When submitting on the web site, you have to indicate the name of the special session. Submission on: www.pro-ve.org, with copy by email to the chairs of the special session.