Special track: Advances and Challenges in Human-Computer Interaction in Digitalized Industry

Special track leaders: Pere Ponsa (Universitat Politècnica de Catalunya Barcelona Tech) and Ramon Vilanova (Universitat Autònoma de Barcelona)

Brief Description:
We are witnessing the massive introduction of digital technologies in the industry, which leads to new production models that are grouped under the concepts of *Connected Industry* and *Industry 4.0*. It is a challenge to put in context the current state of this paradigm in the industrial sphere (how a conventional industry should be transformed), academic (what changes in the teaching plans are necessary) and social (what is the future of work and the new competences of people). It should be noted that some of the dimensions on which the connected industry is based clearly show the presence of methods and technologies that are common in the human-computer interaction discipline.

Thus, for example, highlights the importance of *Collaborative Robotics* (what degree of interaction is allowed between the person and the robot), *Augmented/Virtual Reality* (how to design machine maintenance procedures using glasses/helmet and mixed reality applications), the *Big Data* (how to transform data volumes into quality data and that provide information in information visualization systems), *Industrial Internet of Things* (how effective can be the synergy between IIoT and people-centered design), *3D Printing and Additive Manufacturing* (before edible products which is the person's emotional response), for example.

In general, it is convenient to analyze how the deployment of these dimensions affects the traditional human-machine system models, interaction with new devices, human capabilities and limitations in the management of complex systems, new trends in information visualization.

Topics:
We invite the submission of contributions. Examples topics in the track may include, but are not limited to:
- Conceptual models of HCI for Industry 4.0
- Mixed reality developments in productive environments
- Human-robot Interactive systems
- Interface design
- Human factors and connected enterprise
- Teaching in HCI and connected enterprise

Objectives:
- Announce the importance of HCI in the connected industry
- Show current status of theoretical-experimental research
- Announce good teaching practices
- Analyze trends

Expected audience and outcomes:
This special session is proposed as a meeting point to establish a framework for future work between HCI and Industry 4.0 professionals. A wide audience is invited to contribute their knowledge and experience in this special session, such as academics, researchers, industry experts, professionals working in this field of knowledge.

Important Dates:
Submission Deadline: until April 15, 2019
Author Notification: April 30, 2019
Camera-ready papers due: May 10, 2019

Track Committee
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