SOHOMA'20: 10th Workshop on Service Orientation in Holonic and Multi-Agent Manufacturing for the Industry of the Future.
1-2 October 2020. Paris, France

Session title: **Ethics and social automation in Industry 4.0**

Organisers (max. 4):

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Short presentation:

Based on the development of Artificial Intelligence models and methods, Industry 4.0 fosters the development of more autonomous, intelligent systems interacting or cooperating with humans. This holds also true in the transportation sector where autonomous cars, trains, vessels are being developed. All these developments should be accompanied by strong attention to ethical and societal issues involved in the design, development, operation and maintenance of such systems and their automation beyond classical key performances indicators expressed in terms of effectiveness or efficiency. Ethics and social automation are often seen as an add-on and properly considered in systems engineering. However, with the emergence of intelligence autonomous systems not only in controlled environments but in society at large and with tangible applications that affect people, their sufficient consideration is urgent. It becomes now urgent for researchers working on system engineering and artificial systems in general to pay attention to the ethical and societal angles involved. This session is seeking position papers, ideas, interdisciplinary works, critical analysis and comparison, simulations, even with a low degree of maturity. All aspects relevant to ethics and social automation can be addressed, being relevant to ethical behaviour of researchers (ethical design of systems, techno-ethics), the study of the ethical behaviour of the artificial system designed (design of ethical systems, machine ethics), the impact of automation on society, the ethical risks relevant to the over-integration of humans with artificial systems (e.g., operator 4.0), algorithmic bias and transparency in intelligent autonomous systems and their applications etc. Interdisciplinary studies on the applicability of different ethical and societal frameworks in Industry 4.0, including legal and economic aspects are also of great interest. Inspiration from sci-fi literature, philosophy and other fields relevant to humanities would bring interesting complementary points of view. This session aims to act as a forum for emerging interdisciplinary research relevant to intelligent autonomous systems and their applications in the Industry 4.0 context.

Keywords: ethics, social automation, human-machine cooperation, system engineering, artificial intelligence, bias and transparency, AI safety

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Important dates:

- Proposals of Special Sessions: March 1st
- Full paper submission: April 15th
- Notification of acceptance: May 25th
- Final, camera-ready paper submission: June 25th
- Early registration and fee payment: July 25th
- Workshop days: 1-2 October 2020