IEEE Transactions on Industrial Informatics

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for Special Section on

Security and Privacy in Industry 4.0

Theme: Industries, governments and scientific communities are increasingly drawing a special attention to competitive advantages that Industry 4.0 can bring about business sustainability and economy of a country. The tendency to couple the Information Technologies (ITs) with the existing Operational Technologies (OTs) adds new opportunities to improve and optimize operational processes, products and services in which multiple stakeholders [4], among them, end-users, can interact with the new industrial ecosystems to speed up and customize processes. In this sense, Industry 4.0 constitutes a relevant investment source composed of a complex technological showcase in which multiple connections and accesses can arise, seriously impacting on the well performance of the different production and distribution chains associated with smart factories and manufacturing, smart grid systems, smart vehicles or smart health environments. This way of connecting entities with the "smart world" and the interconnection of different Industry 4.0 domains based on the new paradigms and heterogeneous technologies such as Cyber-Physical Systems (CPS), Industrial Internet of Things (IIoT) or edge computing infrastructures (cloud/fog computing systems), certainly, opens the door to coexistence problems and novel exploitations. Diverse vulnerabilities and risks may significantly grow according to the new adaptations and the participation of stakeholders, generating a need to further research protection issues required to safeguard the operational processes and ensure a secure and resilient and dependable cohesion between IT and OT systems, including physical entities.

For this reason, industries, governments and scientific communities are increasingly drawing a special attention to competitive advantages that Industry 4.0 can bring about business sustainability and economy of a country. The tendency to couple the ITs with the existing Operational Technologies (OTs) adds new opportunities to improve and optimize operational processes, products and services in which multiple stakeholders [4], among them, end-users, can interact with the new industrial ecosystems to speed up and customize processes. In this sense, Industry 4.0 constitutes a relevant investment source composed of a complex technological showcase in which multiple connections and accesses can arise, seriously impacting on the well performance of the different production and distribution chains associated with smart factories and manufacturing, smart grid systems, smart vehicles or smart health environments.

The aim of this special issue is therefore to bring together researchers from diverse interdisciplinary areas of computing and security to cover, from a holistic point of view, the topics related to secure coupling of the new ITs with operational networks, without discarding aspects on privacy.

This special section will focus on (but not limited to) the following topics:

- Security and privacy analysis and requirements in Industry 4.0
- Secure management and governance of Industry 4.0 operational services and systems
- Vulnerabilities and risk assessment in manufacturing and automation systems
- Advanced threat models, cyber-crime or cyber-espionage for Industry 4.0
- Dependable and secure Industry 4.0 architectures by design
- Lightweight cryptography and key management in Industry 4.0
- Identity management and access control for Industry 4.0 domains
- Secure interoperability, mobility and coexistence between systems, including users
- Prevention, awareness and resilience models for Industry 4.0 advanced threats
- Secure context management and accountability for Industry 4.0 domains
- Data preservation and privacy models for Industry 4.0
- Trust management and trusted computing models for Industry 4.0.
- Secure cloud/fog-assisted manufacturing and predictive maintenance services

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Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal. Regular manuscript length is 8 pages.

Note: The recommended papers for the section are subject to final approval by the Editor-in-Chief. Some papers may be published outside the special section, at the EIC discretion.

Timetable:	**Deadline for manuscript submissions**	**June 30, 2019**
	Expected publication date (tentative)	**November 2019**

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