

## **Cyber-Security Challenges in Industry 4.0**

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### **Abstract**

This paper presents cyber-security (CS) challenges in the wake of the Industry 4.0 (I4) age since, considering the high-level of technology employed in this new stage, a proper CS-I4 architecture model is demanded. This dependence for a complete CS system in the I4 forces organizations to create solutions that ensure cyber security effectively implemented and operating whenever is necessary. Real cases and concepts from the literature are summarized in the common challenges. This paper contributes with a thorough discussion on the adoption of the Industry 4.0 considering the threats in an entire process of information, communication, computing, or any data-related issue in an organization. Important steps to minimize risks related to cyber security can be utilized as a framework or best practice manual for early adopters of a CS-I4 system architecture.

### **Keywords**

Cyber security, cyber threats, challenges, Industry 4.0

### **Biography**

**Fabio S. Oliveira** is a MSc candidate in applied computing at Instituto de Pesquisas Tecnológicas of São Paulo, Brazil. He earned his bachelor's in computing science at Universidade Paulista of São Paulo, Brazil and master's degrees in Strategic Management of Technology at Instituto de Pesquisas Tecnológicas of São Paulo, Brazil. He has more than twenty-six of experience as Project Manager, Infrastructure and Information Security specialist in the private sector. His research interests mainly concern Industry 4.0, Cyber Security, Industrial Internet of Things and Cloud systems.

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