

## **Abstract Lecture 2:**

### **Implementing Industrial Systems-of-Cyber-Physical Systems. The Shop Floor as a Service-Cloud offering new “Service-based Business Opportunities?”**

In this talk an overview of key challenges appearing across the industrial enterprise, when it is specified, designed, implemented and running as a Cyber-Physical System under the application of the Service-oriented and Systems-of-Systems paradigms will be addressed. Major features such as structural, operational and managerial independence of the shop floor and enterprise constituent systems, interoperability, plug and play, self-adaptation, reliability, energy-awareness, high-level cross-layer (vertical and horizontal) integration, cooperation and management, among others, will be highlighted. Looking at latest reported Research-Development-Innovation-Results, the major characteristics of first industrial prototype implementations will be presented, describing the application of the Service-oriented Paradigm (SoA) and Multi-Agent Systems to digitalize and virtualize an industrial shop floor and allow it to expose its capabilities as “Service-based Business (Industrial-Internet-of-Services - IIoS)” located in a “Service Cloud”.