




University POLITEHNICA of Bucharest
Faculty of Automatic Control and Computers

Splaiul Independenței nr.313, sector 6, cod 060042,
Bucharest, ROMANIA



	<p>Associate Professor Ioan Ștefan Sacală, Ph.D. Ph.D. coordinator in the “System Engineering” domain Doctoral School of Automatic Control and Computers University Politehnica of Bucharest</p>
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Research profile: the most important research areas are described below:

- 1. Cyber-Physical Systems (CPS):** Main problems of the CPS; analysis of the main problems related to heterogeneity, interoperability and composability; study related to the concept of Intelligent Cyber-Enterprise; analysis of the cognitive enterprise concept using a systemic approach; analysis of CPS in correlation with future internet enterprise systems; design and development of Intelligent Cyber-Physical Systems;
- 2. Future Internet Enterprise Systems (FIInES):** Analysis of the main problems related to Future Internet Enterprise Systems; analysis of the Internet of Things concept and its particularities based on real implementation; analysis of specific concepts such as: Inventive Enterprise, Cognitive Enterprise, Agile Enterprise, Sensing Enterprise, respectively Sensing Systems; usage of a neuro approach for intelligent enterprise and for cognitive production systems.
- 3. Wireless Sensor Network:** Design of specific sensor network within intelligent Cyber-Physical Systems; development of new sensor networks in order to optimize communication; analysis of specific aspects related to implementation (e.g. interoperability, positioning, synchronization, routing, monitoring, performances, energy efficiency, security, etc); study of specific sensor networks (e.g. MANET, VANET) and analysing specific implementation methods within Cyber-Physical Systems; intelligent control systems used for wireless sensor networks.

Research laboratories: Research activity can be carried out in one of the following research laboratories:

1. Research laboratory: Organizational Interoperability and Knowledge Management – research laboratory within the PRECIS research centre <http://precis.acs.pub.ro/cercetare-si-inovare/>
2. Research laboratory: Future Enterprise - research laboratory within the PRECIS research centre <http://precis.acs.pub.ro/cercetare-si-inovare/>
3. Research laboratory: Future Internet Enterprise Systems - Research laboratory within the Automatic Control and Systems Engineering Department, <http://acse.pub.ro/research/acse-research-groups/future-internet-enterprise-systems-fines/>

Scientific Activity: 6 books / book chapters, 21 articles published in top journals (5 Q1 / Q2), more than 60 papers published within various international conferences.

Research project (selection): 2 research projects financed after a national competition as project coordinator from UPB, 4 COST Actions as coordinator from Romania, project coordinator for various research projects financed by the business environment, member within different national and international (FP7 / H2020) research projects.

PhD research subjects proposed: In any of the aforementioned research areas or in complementary research areas, specific research subjects can be proposed in order to align with the international academic communities, as well as with the business environment.