

Abstract Lecture 3:

Learning, Living and Working with Industrial Systems-of-Cyber-Physical System (Training and Education Requirements)

After presenting the scientific and technical background behind Industrial Systems-of-Cyber-Physical Systems (ICPS), their relationship to other frameworks like Systems-of-Systems Engineering, Industry 4.0, Industrial Internet-of-Things (IIoT), and associated technology standardization/normalization initiatives (such as e.g. RAMI4.0 and SGAM), this lecture offers an overview of major requirements to educating, teaching, training people (workers with or without decision-making responsibilities in an Industry 4.0 system, as well as students, technicians and engineers) for learning, living and working with Systems-of-ICPS in a digitalized eco-system. The audience/participants of the lecture will get a deep view about

- Which is the minimal necessary pre-existing Know-How for trainees, students and teachers/lecturers in order to educate for learning, living and work (engineering, operating, interacting with ISoCPS)?
- What and How to learn ISoCPS? (Recommendations for graduated and post-graduate students, as well as for industrialists)
- What and How to educate and teach ISoCPS? (Recommendations for trainees, educators, teachers, etc.). Lessons learned from own experience educating ICPS at Master Degree level.
- Which should be the essential and unavoidable body of knowledge for building an educational curriculum for learning ISoCPS (presentation and discussion of an exemplary curriculum for achieving a Master of Sciences in Industrial Informatics with Specialization in Industrial Cyber-Physical Systems)?