

Call for Participation

IoSense Spring School at SSI 2018: Building Apps for the Internet of Sensors

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<https://iosense.eu/index.php/iosense-spring-school>

Abstract. The Spring School of the JU ECSEL project IoSense demonstrates how to engineer innovative products in sensor-actuator networks. The IoSense project¹ focuses on the availability of top innovative, competitive sensors and sensor systems "Made in Europe" for "Internet of Sensor" applications in smart mobility, society, energy, health care and production.

Participants are enabled to build platforms and complements for hardware/software ecosystems so that their future applications in the Internet of Sensors become reality. The IoSense Spring School presents newest sensor technologies as well as ways to create innovations with them, extending the value chain with easy-to-build software for sensor applications.

1 Objectives and Scope

The target of the IoSense Spring School is to show how to engineer innovative products. The goal is to enable IoT ecosystems based on hardware-software platforms and complementing applications for flexible and high-performance data aggregation and processing in sensor-actuator networks. The future technology of IoSense covers

- Innovative sensor and multi-sensor technologies for heterogeneous application areas
- Highlighting new approaches for developing sensors using flexible frontend and backend pilot lines
- Design of sensor and application components for market needs by involving customers early in the development process
- Enabling external parties to build IoT ecosystems with IoSense technology
- Closing the gap between chip manufacturers and application developers for transforming existing value chain approaches

¹ www.iosense.eu

2 Presenting the IoSense Technology

IoSense targets multiple key application areas to help tackle grand societal challenges of our and future generations. Sensor and app-based innovations in areas such as Smart Mobility, Society, Energy, Health and Production, benefit directly from smart sensor-based systems that communicate among themselves, their environment and offer their services to users. A necessity for smart objects and machines are suitable sensors that are intelligently integrated into future products.

IoSense contributions and solutions are realized in different demonstrators, targeting specific application areas.

During the Spring School selected demonstrators provides an overview about the goal and the addressed key application areas. Components are presented from project experts. Hands-on sessions will focus on integrating sensor components into a software toolbox to showcase the easy-to-use approach on how to build sensor-based applications. The software toolbox is complemented by illustrating the integration of a lean startup inspired process for developing customer centric products and applications.

3 Targeted participants

PhD students, industrial designers, technology scouts and project managers with basic programming knowledge and an interest in sensor-based technologies.

4 Organization Details

Location IoSense Spring School is colocated with the International Conference and Exhibition Smart Systems Integration 2018² in Dresden, Germany.

The IoSense Spring School will take place at Hilton Dresden³, An der Frauenkirche 5, 01067 Dresden.

Schedule The Smart Systems Integration 2018 is a two day event. The IoSense Spring School will be held on April 11, 2018 and consists of a full day program.

First day – IoSense Spring School The Spring School starts with an overall view of the IoSense Demonstrators and focuses on the engineering of innovative applications in IoT ecosystems, employing IoSense Demonstrators.

Agenda:

08:00 Registration

09:00 Keynote session of Smart Systems Integration

10:40 Coffee Break

² <http://www.smartsystemsintegration.com>

³ <http://www.hiltonhotels.de/deutschland/hilton-dresden>

- 11:05** Keynote *Dr. Oliver Pyper*, Infineon Technologies Dresden and Project Coordinator IoSense “Sensing the world for IoT”
- 11:35** Talks *Session 1*
- 12:45** Lunch
- 13:45** Talks *Session 2*
- 15:25** Coffee break
- 15:55** Talks *Session 3*
- 16:40** Workshop session on *IoT Ecosystems – the IoSense Sensor Toolbox* — TU Dresden
- 17:40** Closing notes

Talks:

- (Session 1) IoT from the Perspective of a Sensor Company** *Ewald Wachmann*, Senior Manager - ams AG, Austria
- (Session 1) Innovative Process Chains for Sensors** *Horst Theuss*, Lead Principal - Infineon Technologies Regensburg, Germany
- (Session 2) TrustworSys – Towards Trustworthiness for IoT Sensors** *Thomas Ulz*, TU Graz, Infineon Technologies Austria AG, Austria
- (Session 2) Advanced Packaging of a Micro-Gravity Sensor System: Microsystem Integration from a Hardware Perspective** *Luke Middelburg*, TU Delft, Netherlands
- (Session 2) From Parking Assistance to Automated Parking using a Time-Of-Flight Camera** *Jesus Murgoitio*, Project Manager - Tecnia, Spain
- (Session 2) Passive RFID Sensors – Battery-Free, Wireless Pressure Measurements** *Dr. Andreas Weder*, Team Manager of Module Integration Group in Fraunhofer Institute for Photonic Microsystems (IPMS)
- (Session 3) Virtual Prototyping for Shortest Time-to-Market of New IoT Products (Focus: Design for Reliability)** *Prof. Sven Rzepka*, Fraunhofer Institute for Electronic Nano Systems ENAS, Germany
- (Session 3) Detecting Particles – Make it Simple by a new Fine Dust Sensor**, *Jörg Schulz*, Head of R&D - Dr. Födisch Umweltmesstechnik AG, Germany

Second day – LIFEWEAR We invite all participants on April 12, to visit the LifeWear 2018 workshop⁴ provided by TU Dresden (organized by Mesago Messe Frankfurt GmbH), in which IoSense participants and external researchers present papers on Wearables in Smart Rooms. Wearables are sensor-equipped clothes or gadgets by which innovative application services for humans are realized in different application areas.

⁴ <http://st.inf.tu-dresden.de/LIFEWEAR-2018>

5 Spring School

Date: April 11, 2018

Co-located Smart Systems Integration 2018

Intended audience: IoSense project members and interested third parties with relevant backgrounds

Estimated number of participants: 40-50

Equipment: Projector, flipchart, internet connection

Event Web page: <http://iosense.eu/index.php/iosense-spring-school/>

Address: Hilton Dresden; An der Frauenkirche 5, 01067 Dresden

Registration Fee (until 28.02.2018): 180,00 €

Registration Fee: 300,00 €