



# LIFEWEAR2018

Life with Wearables in Smart Rooms  
April 12th, 2018 in Dresden, Germany

With the advent of standard sensor-actuator platforms for **wearable devices**, such smart watches (e.g., Apple Watch), smartglasses (e.g., Microsoft HoloLens), smart clothing (e.g., data gloves), exoskeletons, and many more, people carry multiple devices simultaneously. This trend imposes completely new challenges to software engineers w.r.t. adaptivity, distribution, interaction, system integration, data handling, resiliency, security and software architectures.

**Software engineering** helps to design and develop complex systems by automating the development process concentrating on different levels of abstraction. Model-driven techniques must be established to improve the quality (e.g., re-usability, reliability, maintainability) of the developed wearable systems.

Because hardware and software interact tightly, new skills and processes are required when designing and implementing solutions based on wearable devices. In addition, the integration of wearable devices with other smart devices installed in the environment (e.g., sensors in a room) requires that the system architecture is highly dynamic. Therefore, there is a need for a new paradigm of software and system development for wearables in **smart rooms**, based on sensor nets, fog, and edge computing. This trend suggests establishing a new joint community of researchers from sensor nets and software engineering.

The **LifeWear** workshop aims to bring together researchers and practitioners from the communities interested in wearables, to present current approaches w.r.t. software engineering of wearable devices, gather requirements for future wearable systems and develop a roadmap for software engineering for wearables.

This includes the following research areas

- Model-driven software development for wearable systems
- Innovative interaction approaches of humans with wearables
- Interactions of wearables with machines (e.g., robots)
- End-user application development
- Embedding of wearables into a fog or edge of a smart room
- Sensor data analytics and data aggregation
- Technical approaches to ensure data security and privacy
- Total cost of ownership of wearable systems

## KEYWORDS

**WEARABLES, MODEL-DRIVEN SOFTWARE ENGINEERING, SMART ROOMS, FOG COMPUTING, EDGE COMPUTING**

## IMPORTANT DATES

**Extended Submission Deadline, January 28th**

**Submission Deadline** January 7th, 2018

**Notification** February 11th, 2018

**Camera Ready** March 11th, 2018

**Workshop** April 12th, 2018

## SUBMISSION INFORMATION

Papers should be submitted electronically in PDF format via EasyChair. Submitted papers must conform to the **Lecture Notes in Computer Science (LNCS)**.

Submissions to the workshop are possible in two categories:

- Regular Papers should describe original work on a problem or solution w.r.t the described topics of interest on up to **fifteen pages**.
- Interested workshop participants will have to submit a position paper (**two to four pages**) containing a description of the area of research, specific work on the workshop topic, and the innovative character of the research.

The accepted papers will be digitally published in the **CEUR Workshop Proceedings**.

## LOCATION

**LIFEWEAR2018** is colocated with the International Conference and Exhibition **Smart Systems Integration (SSI)** in the Hilton Dresden, Germany.

**For more Information please visit**

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