

The future of health data monitoring: meeting emerging needs with novel sensing and photonics technologies

This workshop aims to address the pressing challenges regarding health data monitoring. **We will explore how sensing and photonics technologies can facilitate non-invasive, easily accessible, and real-time monitoring of health and well-being.**

Wearable technologies have seamlessly integrated into our daily lives, revolutionizing how we monitor our fitness levels. From counting steps to tracking heart rate via smartwatches, these devices have become ubiquitous. Moreover, significant strides have been made in advanced health monitoring, extending to measurements like oxygen saturation and pioneering efforts in wrist-based glucose level detection.

However, the frontier of health monitoring extends far beyond these achievements. What are the cutting-edge advancements in detecting an even broader range of biomarkers? How is the field evolving towards mobile diagnostics and even preventative medicine? This workshop delves into the latest innovations in wearable health data monitoring, focusing on technological advancements, enhanced functionality, and the drive towards miniaturization. We'll examine the pivotal role of innovative sensor technology and photonics in transforming wearable healthcare devices, impacting our everyday lives, and improving patient care in critical hospital environments.

This workshop, jointly organized by the Innovation Booster Photonics, the Health Innovation Hub Initiative by the Innovation Park Ost, Empa St.Gallen and the Fachhochschule OST, promises a day filled with cutting-edge insights. Dive into the world of advanced healthcare solutions with lab tours at the Empa, explore the Innovation Park Ost Showroom, showcasing healthcare innovations, listen to expert talks on the latest technological advancements, and engage in deep-dive group discussions to uncover areas of need, potential solutions and identify novel collaboration partners.

Date / Location

Date: Thursday, 20. June 2024

Duration: 10.30* a.m. – ca. 5.30 p.m; *from 9.00 a.m. to 10.00 a.m. optional labtour

Location: Switzerland Innovation Park Ost, Lerchenfeldstrasse 3, 9014 St.Gallen

Target audience

This workshop aims for both, partners seeking an innovative solution and potential technology providers – e.g. healthcare professionals and researchers, representatives from healthcare industries, business developers / product managers / R&D specialists in sensor and photonics technology

Registration compulsory

Workshop: register [here](#)

Optional Labtour: if you are interested, please send an e-mail to Bärbel Selm, baerbel.selm@innovationspark-ost.ch

Language

English & Deutsch - talks will be held in English and group discussions in the desired language.

Program

Time Presentation & Topic

9:00 h Optional labtours at Empa and Showroom Switzerland Innovation Park OST - separate registration required by e-mail to baerbel.selm@innovationspark-ost.ch

10:00 h Arrival & Welcome Coffee at Switzerland Innovation Park Ost

10:30 h Welcome & Introduction into the Workshop

10:45 h Input talks, Part I – Research Perspective:

- **Prof. Guido Piai, FH OST** – «Wearable, Wireless and Mobile Health Data Monitoring: Perspectives, Challenges and Risks»
- **Dr. Luciano F. Bösel, Empa** – «Photonic Textiles for Healthcare»
- **Dr. Fabian Braun, CSEM** - «Unobtrusive Long-Term Monitoring Using Wearables»

11:45 h Networking Lunch

12:45 h Input talks, Part II – User Perspective:

- **Prof. Dr. med. Christiane Brockes, alcare AG** – «SmartHealth@Home - Health Monitoring & Telemedical Intervention in Real-Time: what are the Challenges?»
- **PD Dr. Maximilian Bösch, Kantonsspital St.Gallen** – «Clinical Needs for Monitoring Patients with Respiratory Diseases»

Input talks, Part III – Industry Perspective:

- **Prof. Dr. Peter Seitz, epyMetrics AG** – «Wearables: on the Way to the Portable Health Lab»
- **Dr. Philipp Vetter, Rheo AG** – «Stream Vital Patient Data from Anywhere»

14:15 h Coffee Break

14:45 h Group Discussions to explore challenges and needs in more detail and discuss possible approaches and solutions:

- **Group 1**, «Novel biomarkers & simultaneous detection of various biomarkers» moderated by **Dr. Samantha Paoletti, CSEM**
- **Group 2**, «Data integrity, privacy & regulatory in health data monitoring» moderated by **Prof. Adrian Weitnauer, FH OST**
- **Group 3**, «Digitalisation, data processing and algorithms for health data» moderated by **Dr. Sven Hoffmann, Switzerland Innovation Park Ost**
- **Group 4**, «Novel trends in spectroscopy for health monitoring» moderated by **Dr. Selina Casutt, Innovation Booster Photonics**

15:45 h Wrap up in the Plenum

16:15 h Networking Apéro