A HBS-DP course on

“Biosensor Assemblies and their Applications”

Course topic: Biosensor Assemblies and their Applications  
Time of the event: 3-4.12.2018  
Organizers: Health and Biosciences Doctoral Programme (HBS-DP), Biocenter Oulu, InfoTech Oulu and FBMM  
Course study points: 0.5 (ECTS)

Tentative Program:

Monday 03.12.2018

08.30-9.00 Coffee

09.00-09.10. Wellcome and opening words by Seppo Vainio  
09.10-09.30. Oulu University Vice Rector Arto Maaninen and Prinotecent Director Ilkka Kaisto – Wellcome and the “History of Printed Intelligence”

Session I. The ABC of the Biosensors  
Chair: Seppo Vainio

09.30-10.15. Adama Sesay: Introduction to biosensors  
10.15-11.00. Jussi Hiltunen: Opto-fluidic by biosensors by printing  
11.00-11.30. Katri Laatikainen: MIP for monitoring ions  
11.30-12.00 Gillan Liam: A wearable electrochemical biosensor for determination of lactate in sweat

12.00-13.00. Lunch break & interactions:
Session II: Solutions in Developing Biosensors  
Chair: Jussi Hiltunen
13.00-13.30. **Seppo Vainio**: Developing real-time and personalized medicine enabling vital biosensors  
13.30-14.15. **Gabriela Yrjänä**: Carbon nanotube based biosensors

**14.15-14.45. Coffee, tea & interactions**

Session III: Biosensors and Their Technological Solutions – Chair: Leena Hakalahti
14.45-15.45. **Jouko Peltonen**: Printed paper-based chemical and biosensor solutions

**Summaries of the biosensor day and closing Seppo Vainio & Juha Röning**

Speakers dinner 19.00-

Tuesday 04.12.2018

09.00-09.30. **Coffee, tea & interactions**

Session IV: Biomechanic and Optics Sensor Solutions – Chair: Maria Smolander
09.30-10.15. **Jukka Kortelainen**: Brain monitoring in the intensive care - From research idea to a start-up company  
10.15-10.45 **Wei Cao**: Light manipulation through nanosurfaces  
10.45-11.45. **Almeida S. Helder**: Nanomedicines for targeted drug delivery and precision medicine

**11.45-13.00. Lunch break & interactions**

Session V: Bioelectronics, Biosensors – Networks - Chair: Juha Röning
13.00-13.45. **Sivashankar Krishnamoorthy**: Fabrication And Investigation Of Functional Nanostructures For Nano-Enabled Optical And Electronic Biosensing  
13.45-14.30. **Matti Hämäläinen**: 5G/6G telecommunication networks as enablers for medical ICT  
14.30-15.00. **Ville-Veikko Telkki**: Development of novel NMR methods to characterize properties of molecules, materials and nanosystems

**Summary of the Biosensor days and closing by Juha Röning - Seppo Vainio**