

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

Halls: 3.12. F101 and 4.12. Leena Palotie Auditorium

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 **Printocent 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

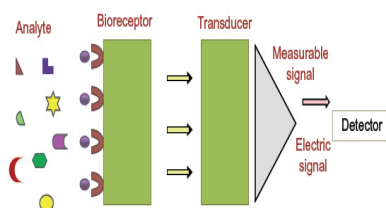
11.45-13.00. Lunch break & interactions

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

