Swedish Microfluidics in Life Science conference 2025

June 16 - 17

Belfragesalen

Klinikgatan 32, Lund (link to google maps)

Program

Monday, 16 June

10:30 Registration and Coffee

11:00 Welcome Address

Session 1: Chair Håkan Jönsson

Keynote Speaker 1

11:10 Two Photon Polymerization for Structured and Dynamic Microfluidic Systems
Christine Selhuber-Unkel, Heidelberg University, Germany

Oral Presentations

11:50 Three Organs-on-Chip Platforms with TEER read-out
Sofia Johansson, Uppsala University

12:05 Passive Viscoelastic Fluidic Components
Enrico Turato, Lund University

Exhibitor Flash Talks

12:20 BergmanLabora – Life Science Research
Oliver Garna, Bergman Labora

12:25 Multipurpose Microfluidic
Henrieke Meijer, Micronit

Poster & industrial exhibition

12:30 Lunch Break sponsored by BergmanLabora

BERGMAN LABORA

Session 2: Chair Björn Hammarström

Keynote Speaker 2

13:30 Cells Under Stress – Deformability Cytometry for High-Throughput Phenotyping
Shada Hofemeier Abu Hattum, Max Planck Institute for the Science of Light, Erlangen

Oral Presentations

14:10 Multimodal acoustofluidic control: towards manipulating single cells
Alexander Edthofer, Lund University

14:25 A Practical Method for Generating Small-Intestine-on-a-Chip Devices Through Viscous Finger Patterning Technique
Sergio Davila Martinez, Lund University

Pitch Presentations 1

14:40 Nickel Monitoring Using a Distance-Based Paper Analytical Device
Enahoro Asein, Stockholm University

Microfluidic Separation of Polyploid Cancer Cells
Jason Beech, Lund University

Unraveling Breast Cancer Heterogeneity: Microfluidic Sorting and Bioassay-Based Functional Analysis
Esra Yilmaz, Lund University

Biofilm Formation Analysis via Time-Resolved Droplet Microfluidics and Artificial Intelligence
Daniela Pérez Guerrero, University of Gothenburg

Identification and Segmentation of Fungal Soil-Borne Plant Pathogens Using Microfluidic Soil Models and Deep Learning Image Analysis
Erik Karlsson, Lund University

Two-Layer Spin Coating Enables Increased Control Over the Trophic Network in Soil Samples
Ada Behncké Serra, Lund University

Investigation of Communication Between Single Cells Using Microfluidic-Based Electroporation
Yupeng Yang, Lund University

An In Vivo Mimetic Liver-Lobule-Chip (LLoC) for Stem Cell Differentiation and Hepatocyte-Like Cell Maturation On-Chip
Charlotte Hamngren Blomqvist, University of Gothenburg

Improved Nanochannel Microscopy for Single Extracellular Vesicle Analysis
Viktoria de Carvalho, Chalmers University of Technology

Synchronisation of Calcium Oscillations in Pancreatic β-Cells Using Microfluidics and Fluorescence Microscopy
Elisa Ortiz Rivero, University of Gothenburg

Evaluation of Hamamatsu Ultra Compact Spectrometric Head C12880MA as Detector for Simple, Portable and Low-Cost Spectrophotometer for Flow Injection Measurements
Veiko Rütter, Tallinn University of Technology

Enhanced optical biosensing using semiconductor nanowires
Noah Al-Khulaifi, Lund University

Digested double emulsions manufactured by microfluidics enhance permeability of encapsulated peptide
Hannah Pohlit, Uppsala University

Poster & industrial exhibition

15:25 Fika sponsored by Micronit

Session 3: Chair Hanbang Zou

Oral Presentations

16:10 A versatile microfluidic platform for mimicking liver zonation in vitro
Reza Mahdavi, Gothenburg University

16:25 Detection of soilborne fungal and oomycete plant pathogens through the use of microfluidic SoilChips and deep learning
Julia Forsbacka, Lund University

16:40 Towards the generation of extracellular matrix protein microcapsules using droplet-based microfluidics
Sadaf Pashapour, Heidelberg University

16:55 Automated Isolation and Concentration of Bacteria from Blood Samples for Rapid Sepsis Diagnosis
Mohammad Osaid, KTH Royal Institute of Technology

17:10 Elasto-Inertial Spiral Microfluidics for Size-based Bacteria Separation for Sepsis Diagnostics
Kenia Chávez Ramos, KTH Royal Institute of Technology

19:00 Conference Dinner
Bryggan Kitchen & Café, Formstråket 13, 223 62 Lund (link to google maps)

Tuesday, 17 June

Session 4: Chair Thierry Baasch

Keynote Speaker 3

09:00 Integrating Microfluidics and Light Sheet Illumination for Whole-Cell Multi-Target 3D Single-Molecule Super-Resolution Imaging
Anna-Karin Gustavsson, RICE University, Houston

Pitch Presentations 2

09:40 A Paper-on-a-Roll Platform Integrating Paper-Based Analytical Devices for Automated Water Monitoring
Enahoro Asein, Stockholm University

Exploring Nanoplastic Pollution Effects on Soil Protists Behavior on Soil Chips Aided by Deep Learning
Hanbang Zou, Lund University

A Tale of Waves and Light: Formation Mechanism of Supported Lipid Bilayer Highly Curved Lightguiding Nanowires
Julia Valderas Gutiérrez, Lund University

Optical Fibers for Cancer Cell Detection and Capture
João Carlos Varela, KTH Royal Institute of Technology

Lightguiding nanowires for single molecule detection with TIRF-level sensitivity
Rubina Davtyan, Lund University

Uncovering Metal Induced Collateral Resistance in Bacteria Using a Droplet-Based Microfluidic System
David Gonzalez, Tallinn University of Technology

Whole Blood Acoustophoresis Maintains Platelet Function Without Significant Activation
Amal Nath, Lund University

Strain Typing of S. pyogenes Using Optical DNA Mapping
Radhika Nambannor Kunnath, Chalmers University of Technology

Enhanced Chemical Reaction Rate via Mixing with Viscoelastic Waves at Low Reynolds Numbers
Enrico Turato, Lund University

Nanostraw Electroporation: A New Delivery Method Within the Field of Epigenetic Editing
Frida Ekstrand, Lund University

Bulk and Digital Seeding Amplification Assay for Early Parkinson's Disease Diagnosis
Karolina Matulewska-Sobczuk, Lund University

Immune niche-on-a-chip enabled by in situ high-resolution 3D printing
Simon Sayer, UpNano

Effect of particle shape on sorting based on DLD
Elham Akbari, Lund University

The Formation of Cell Clusters in Flow
Jason Beech, Lund University

Poster & industrial exhibition

10:25 Fika sponsored by  **Zeiss**

Session 5: Chair Elisa Ortiz Rivero

Oral Presentations

11:10 High-Throughput In Situ Photolithographic Synthesis of Nucleic Acids on Microarrays for Aptamer Screening and Digital Data Storage
Tadija Kekic, Lund University

11:25 IntesTiny: Microfluidic device for the investigation of nanoparticle biotransformation in the gastrointestinal tract
Yael Suarez, Uppsala University

11:40 Label-free droplet image analysis with Cellprofiler
Dániel Kácsor, Tallinn University of Technology

Poster & industrial exhibition

11:55 Networking Lunch – industrial exhibition

Session 6: Chair Sofia Johansson

Keynote Speaker 3

12:55 Bacteria–Immune System Interactions for Innovative Vaccine Development
Di Tang, Lund University, Sweden

Oral Presentations

13:35 Parallel 3D Microtumour Generation by Continuously Adapting Ultrasound
Björn Hammarström, KTH Royal Institute of Technology

13:50 Utilizing nanochannel microscopy for charge measurements of single extracellular vesicles
Elin Persson, Chalmers University of Technology

14:05 Combining paper-based microfluidics with electroanalysis for on-site manganese detection
Enahoro Asein, Stockholm University

14:20 Award Ceremony and Concluding Remarks

14:30 Conference adjourns