

<b>Wednesday June 1<sup>st</sup> 2022</b>	
Ångström Laboratory Siegbahnsalen	
Registration open from 09:00	
11:00 – 11:20	Registration and Fika
11:20– 11:30	Welcome and Opening Remarks
<b>Optical read-out in microfluidics</b> Chair: Maria Tenje	
11:30 – 12:45	Keynote Lecture <b>Simultaneous imaging, patch-clamp, electrotaxis and Raman spectroscopy of functional single cells</b> <i>Kerstin Ramser, Luleå Technical University</i>
	<b>Indirect and direct visualization methods for protein-DNA interactions in nanofluidic single molecule studies</b> <i>Carl Möller, Chalmers University of Technology</i>
	<b>Image segmentation of microfluidic droplet encapsulated spheroids by deep learning</b> <i>Marta de Lucas Sanz, KTH Royal Institute of Technology</i>
12:45 – 13:30	LUNCH
<b>Systems and Fabrication</b> Chair: Håkan Jönsson	
13:30 – 15:00	Keynote Lecture <b>Microfluidic systems to investigate multiple stressors in environmental toxicology</b> <i>Lars Behrendt, Uppsala University</i>
	<b>A microfluidic platform for SAXS measurements of liquid samples</b> <i>Anna Fornell, Lund University</i>
	<b>New capillary electrophoresis-mass spectrometry device for microextraction directly from biological surfaces</b> <i>Anastasia Golubova, Uppsala University</i>
	<b>The hydrodynamic boundary condition investigated by neutron scattering methods</b> <i>Max Wolff, Uppsala University</i>
15:00 – 16:30	COFFEE BREAK & POSTER SESSION
<b>Organs-on-chip</b> Chair: Sofia Johansson	
16:30 – 17:30	<b>An in vitro model system to study cellular responses to transcellular flow</b> <i>Sarah Schnabellehner, Uppsala University</i>
	<b>Microfluidic reprogramming and neural differentiation – improving cell homogeneity and enabling standardization</b> <i>Saumeey Jain, KTH Royal Institute of Technology</i>
	<b>Incorporation of a spider silk membrane into an open-top lung-on-chip</b> <i>Linnea Gustafsson, Spiber Technologies AB</i>
	<b>Miniaturized cytotoxicity assays in multichambered microwell chips</b> <i>Niklas Sandström, KTH Royal Institute of Technology</i>
19:30 –	Reception and Dinner at Villa Anna

<b>Thursday June 2<sup>nd</sup> 2022</b>	
Ångström Laboratory Siegbahnsalen	
Registration open from 08:00	
<b>Physics of microfluidics</b> Chair: Fredrik Westerlund	
09:00 – 10:30	Keynote Lecture <b>Micro- and nanofluidic systems for nanoparticle analytics and cell membrane models</b> <i>Fredrik Höök, Chalmers University of Technology</i>
	<b>Separation of singlets and clusters of group A streptococci using deterministic lateral displacement and filter-sonication</b> <i>Elham Akbari, Lund University</i>
	<b>Understanding thermoacoustics</b> <i>Enrico Corato, Lund University</i>
	<b>Do optimal culture conditions for organoid size and vascularization exist?</b> <i>Willy Bonneuil, KTH Royal Institute of Technology</i>
10:30 – 11:00	COFFE & POSTERS
<b>Lab-on-a-chip 1</b> Chair: Per Augustsson	
11:00 – 12:00	<b>Microscale immiscible filtration and isothermal amplification for capture and detection of Neisseria gonorrhoeae DNA</b> <i>Pablo Rodriguez, Stockholm University</i>
	<b>Rapid Antibiotic susceptibility testing at the point of care</b> <i>Lovisa Söderberg, Astrego Diagnostics AB</i>
	<b>Rapid antibiotic susceptibility testing and species identification for mixed infections</b> <i>Praneeth Karempudi, Uppsala University</i>
	<b>Biomolecular translocation through nanopores with polymer brushes</b> <i>Julia Järlebark, Chalmers University of Technology</i>
12:00 – 13:00	LUNCH
<b>Lab-on-a-chip 2</b> Chair: Morteza Aramesh	
13:00 – 14:45	<b>A hybrid gas-liquid microfluidic chip as interface to Mass Spectrometry</b> <i>Giovanni Marinaro, Lund University</i>
	<b>A microfluidic toolbox for at-line protein monitoring in mammalian cell culture processes for biopharmaceutical production</b> <i>Inês Pinto, KTH Royal Institute of Technology</i>
	<b>High-throughput acoustic particle separation</b> <i>Thierry Baasch, Lund University</i>
	<b>Mapping the acoustic properties of non-polar fluids for droplet acoustofluidics</b> <i>Qian Shi, Uppsala University</i>
	Keynote Lecture – via Zoom <b>Droplet microfluidics as artificial cells</b> <i>Petra Dittrich, ETH</i>
14:45 – 15:00	Prize ceremony and Closing Remarks Announcement of SMILS 2023
	End of SMILS 2022

<b>Poster Presentations</b>	
Posters can be viewed throughout the meeting	
1 (1513)	<b>Multiplexed optical DNA mapping for identification of antibiotic resistance genes in plasmids</b> <i>Sriram Kesaramangalam Kalyanavenkatramanan , Chalmers University of Technology</i>
2 (2626)	<b>Sorting of cancer cell into different subpopulations using deterministic lateral displacement</b> <i>Esra Yilmaz, Lund University</i>
3 (2674)	<b>Integrating nanocellulose in a microfluidic platform for topography guided cell culture</b> <i>Lulu Wu, Uppsala University</i>
4 (3855)	<b>Optical DNA mapping-based de novo assembly of the Schizosaccharomyces pombe genome</b> <i>Luis Mario Leal Garza, Chalmers University of Technology</i>
5 (5432)	<b>A microfluidic device for universal assessment of biomaterials in vitro</b> <i>Abdul-Raouf Atif, Uppsala University</i>
6 (5494)	<b>Integrated optical read-out for bead-based assays in an acoustic trap</b> <i>Gabriel Werr, Uppsala University</i>
7 (7206)	<b>A novel microfluidic device for measuring single cell oxygen metabolism</b> <i>Yuan Cui, Uppsala University</i>
8 (7373)	<b>New 3D printed microfluidic device to extract parasite eggs from horses' manure</b> <i>Enrico Turato, Lund University</i>
9 (7964)	<b>2-photon polymerization – benchmarking commercial printers to access the nanometric scale in 3D printing</b> <i>Federico Cantoni, Uppsala University</i>
10 (8492)	<b>Effect of Droplet Size on Bacterial Growth in a Microfluidic System</b> <i>Sagar Agnihotri, Uppsala University</i>
11 (8663)	<b>Electrical and optical monitoring of an epithelial barrier under ON/OFF flow profiles</b> <i>Sofia Johansson, Uppsala University</i>
12 (9162)	<b>Developing a biosensor for detection of Interleukin-6</b> <i>Team Uppsense, Uppsala University</i>
13 (9569)	<b>Combined effects of temperature stress and UV filter exposure on Symbiodiniaceae single cells</b> <i>Linhong Xiao, Uppsala University</i>
14 (9732)	<b>Bacterial Typing using Optical DNA Mapping for Diagnostics of Clinical Infections</b> <i>Zahra Abbaspour, Chalmers University of Technology</i>
15 (6339)	<b>Nano-DESI mass spectrometry imaging and solvent effects</b> <i>Johan Lillja, Uppsala University</i>
16 (9014)	<b>High-throughput on-chip electroporation of bacteria</b> <i>Zahra Khaji, Uppsala University</i>
17 (0921)	<b>Microfluidics for mapping electrotaxis in cancer cells using Raman spectroscopy: challenges and perspectives</b> <i>Daniela Rassler, Luleå University of Technology</i>
18	<b>Synchronization waves induced by metabolic communication between individual cells</b> <i>Caroline Adiels, Gothenburg University</i>