



2018 NanoBioTech-Montreux

Monday, October 29, 2018

08:00 - 09:00 Registration	
Session M-1	Chair: Jonas Tegenfeldt
09:00 - 09:05 Opening and Welcome	
09:05 - 09:45 Invited Keynote Lecture: Mauro Ferrari, Houston Methodist Research Institute, USA <i>My 25 Years in Nanofluidics: Lessons Learned</i>	p.1
09:45 - 10:05 Jonathan Butement, University of Southampton, UK <i>Optofluidic cytometer for extracellular vesicle analysis</i>	p.3
10:05 - 10:25 Elodie Sollier-Christen, Vortex Biosciences, USA <i>Microfluidic label-free isolation and enumeration of circulating tumor cells from blood samples</i>	p.5
Coffee break	
Session M-2	Chair: Jonathan West
11:00 - 11:20 Sebastian Knust, Bielefeld University, DE <i>Elasto-Tweezers: A novel platform for high-precision cell elasticity measurements</i>	p.7
11:20 - 11:30 Bilel Rais, Innophysics B. V., NL <i>μPlasmaPrint: digital on-demand surface engineering for biological, chemical and medical applications</i>	p.9
11:30 - 11:50 Poster snapshots, session A1	
Lunch break at the hotel (included in the registration)	
Session M-3	
14:00 - 14:30 Invited: Nicolas Verplanck, CEA-LETI / Make Fluidics, FR <i>Microfluidic standardization: status and roadmap</i>	p.9
14:30 - 14:50 Clement Achille, KU Leuven, BE <i>3D-printed autonomous microfluidics: Liquid handling</i>	p.11
14:50 - 15:10 Marie Salva, IBM Research-Zurich, CH <i>Programmable hydraulic resistor for microfluidic chips using electrogate arrays</i>	p.13
Coffee break	
Session M-4	Chair: Séverine Le Gac
16:00 - 16:30 Invited: Morgan Delarue, LAAS / CNRS, Toulouse, FR <i>Microbes under pressure: From direct mechano-sensing to indirect consequences</i>	p.15
16:30 - 16:50 Poster snapshots, session A2	
16:50 - 18:30 Poster Session A in the poster area / Exhibition Reception / drinks	
19:30 Conference Dinner at Hotel Eurotel (included in the registration)	

Tuesday, October 30, 2018

Session T-1		Chair: Yegân Erdem
09:00 - 09:40	Invited: Madhavi Krishnan, University of Oxford, UK <i>Single molecule electrometry: visualizing molecular electrostatics and 3D structure in an optical microscope</i>	p.17
9:40 - 10:00	Damiano Verardo, Lund University, SE <i>Enhancing Fluorescence Detection with Lightguiding Nanowires</i>	p.19
10:00 - 10:20	Poster snapshots, session B1	
Coffee break		
Session T-2		Chair: Philippe Renaud
11:00 - 11:30	Invited: Govind Kaigala, IBM Research-Zurich, CH <i>Hydrodynamic shaping of sub-nanoliter volumes of liquids on surfaces for multi-modal molecular analysis</i>	p.21
11:30 - 11:50	Bastien Venzac, University of Twente, NL <i>Testis-on-chip models to study in-vitro human spermatogenesis</i>	p.23
11:50 - 12:10	Cornelia Nef, NTB University of Applied Sciences Buchs, CH <i>Microfluidic device to model microvascular obstructions in heart attack patients</i>	p.25
12:10 - 12:30	Julie Probst, ETH Zürich, CH <i>Droplet microfluidics for the investigation of nucleation and growth of nanocrystals via real-time fluorescence lifetime analysis</i>	p.27
Lunch break at the hotel (included in the registration)		
Session T-3		Chair: Andrew de Mello
14:00 - 14:30	Invited keynote lecture: Tuomas Knowles, Cambridge, UK <i>Probing proteins in small volumes</i>	p.29
14:30 - 14:50	Kokoura Mensah, Laboratoire de Nanobiophysique, ESPCI, FR <i>Biosensing with graphene transistor arrays</i>	p.31
14:50 - 15:10	Iwan Märki, Abionic SA, CH <i>Nanotechnology for point-of-care diagnostics</i>	p.33
Coffee break		
Session T-4		Chair: Séverine Le Gac
16:00 - 16:30	Invited: David Quéré, ESPCI et École polytechnique, Paris, FR <i>How to repel water: the lessons of culex, psaltoda, notonecta & argyroneta</i>	p.35
16:30 - 16:50	Poster snapshots, Session B2	
16:50 - 19:00	Poster Session B in the poster area / Exhibition Reception / drinks	

Wednesday, October 31, 2018

Session W-1	Chair: Jonathan West	
09:00 - 09:30 <i>Invited: Piotr Korczyk, Institute of Fundamental Technological Research / PAS, PL</i> <i>Is microfluidics as accurate as we wish? The perspectives for precision improvement</i>		p.37
09:30 - 09:50 <i>Marine Luciano, University of Mons, BE</i> <i>Microstructured soft hydrogels for studying the role of the curvature on epithelial tissues</i>		p.39
09:50 - 10:10 <i>Séverine Le Gac, University of Twente, NL</i> <i>Enhancing Nanomedicine Penetration in Tumor Tissues Using Ultrasound Activation of Microbubbles</i>		p.41
Coffee break		
Session W-2	Chair: Jonas Tegenfeldt	
10:40 - 11:00 <i>Adrien Saint-Sardos, Institut Pasteur, FR</i> <i>On-chip quantification of cytokine secretion from single spheroids of human mesenchymal stem cells</i>		p.43
11:00 - 11:20 <i>Maaïke Jongen, University of Southampton, UK</i> <i>Distinct single platelet diversity programs govern collective hypersensitivity and aggregation behaviours</i>		p.45
11:20 - 12:00 <i>Plenary Invited Closing Lecture: Oscar Ces, Imperial College London, UK</i> <i>Artificial Cells and Cellular Bionics</i>		p.47
12:00 - 12:20 <i>Award ceremony for Poster Prizes and closing of the conference</i>		

Thanks for your participation! And hopefully, see you next year.

