



2018 NanoBioTech-Montreux

Monday, October 29, 2018

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| 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

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| 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

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| 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.

