



# 2018 NanoBioTech-Montreux

Monday, October 29, 2018

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

## Tuesday, October 30, 2018

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

**Wednesday, October 31, 2018**

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

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

