

Preliminary program of the 2 day workshop:
 “NanoBio Surfaces and Interfaces in Healthcare and Science”

Programme Morning 8 May 2018

7.00	Hal open for table booth installations		
8.00	Doors open/coffee		
8.30	Opening by Philip Renaud , EPFL, Chair		
8.40-9.10	1 st keynote: Roland Zengerle , Hahn-Schickard-Director Freiburg & Villingen-Schwenningen “Molecular diagnostics at the Point-of-Care by centrifugal microfluidics”		
9.10-9.30	Hugo de Haan, introduction & presentation of 3 selected Alp region recent Start-ups		
	1. Christian Mathis , Dr. sc. ETH , SuSoS AG: “.PAcrAm - a Novel Sensing Platform for Next Generation Sequencing		
	2. Iwan Märki , Abionic SA, Switzerland, “Nanotechnology for point-of-care diagnostics”		
9.30-10.00	Coffee / tea at booth area		
Start parallel workshop sessions			
	Salle Polyvalente Surface functionalization, antimicrobial/antifouling coatings and analytics, detection, imaging. Moderator: Thomas Pfohl (back-up Peter Miethe)	Demo salle (hall) Cell-material interaction for organ-on-chip devices & regenerative medicine @ the nano scale Moderator: Stefan Giselbrecht /Pascal Jonkheim?	la salle CE1 104 Human diagnostic devices Moderator: Hatice Altug
10.00-10.20	Katja Fricke , INP Greifswald, Head Research Programme Bioactive Surfaces “On the tailoring of cell-surface interactions by plasma-based surface engineering”	Stefan Giselbrecht , MERLN . “Membrane-based microfluidic systems for advanced 3D cell culture models”	Hatice Altug , EPFL. “Lab-on-a-Chip Nanophotonic Biosensors for Biology and Diagnostics”
10.20-10.40	Dr. Jörg Funk , Voxalytic GmbH “Micro-solenoids – allrounder component for sensing, acting and transmitting on micro and nano-level”		
10.40-11.00	Alessandro Patelli , Padova University. Title “Surface functionalization, nano roughness and drug delivery by atmospheric plasma jet on 3D printed scaffolds” (with Nadirtech)	Maurits van der Heiden , TNO, bio-NOMI “In-vitro monitoring organ on chip systems by their nano mechanical behavior”	Tzu-En Lin EPFL “Imaging the distribution of graphene oxide nanoribbons in mice livers by electrochemical probe”
11.00-11.20	Philip Paul , SwissLitho AG “Thermal scanning probe lithography for bio applications”	Norman D.H. Munroe , Florida International University “Surface Treated Biosorbable Materials for Sensors and Cardiovascular Applications”	Wilfried Weigel , Scienion, Ge “Miniaturized Planar Multiplex Analytics – From R&D to Hightthroughput Manufacturing”
11:20-11:50	Coffee Break		
	Moderator: Thomas Pfohl (back-up Peter Miethe)	Moderator: Stefan Giselbrecht /Pascal Jonkheim?	Moderator Stavros Stavrakis
11.50-12.10	Peter Miethe , Research Centre of Medical Technology and Biotechnology mbH “Veterinary diagnostics- a playground for innovative lab on chip devices?”	Pascal Jonkheijm , UT/MESA+ “Supramolecular materials and interfaces for biological and biomedical applications”	Hywel Morgan , Univ of Southampton, UK “ From SmartPhones to Diagnostics”
12.10-12.30	Bo Claerebout , PharmaFluidics, “Micro Pillar Array Columns (μPAC™): the heart of a versatile and robust platform for limited cell count proteomics”	Serena Danti , OTOLab @ Cisanello Hospital, Pisa, The BioRobotics Institute, Pontede, Italy “Piezoelectric nanomaterials with anti-inflammatory and immunomodulatory properties for cochlear stimulation” .	Aliki Tsopela , Micronit “Microtechnologies enabling point-of-care testing”
12.30-12.50	Andrea Valsesia , Advanced Analytical Methods , European Commission, Directorate General Joint Research Centre “Direct quantification of nanoparticles hydrophobicity”	Wolfgang Wagermaier , Max Planck Institute of Colloids and Interfaces , Department of Biomaterials, Research Campus Golm , Potsdam, Germany. “Osteocyte network architecture and bone material properties in healthy and healing bone”	Dr Stavros Stavrakis , ETH Zurich , group Andrew J. deMello “OPTOFLUIDIC PLATFORMS FOR HIGH-THROUGHPUT AND HIGH PRECISION MEASUREMENTS IN FLOW CYTOMETRIC DETECTION” (theme; surface functionalization)

12.50-13.10	Maximilien Guerin , Fluigent S.A. “Microfluidic Flow control instruments to model cell microenvironment”	Samuele Tosatti , SuSos AG “Stem cells React on Form and Surface – Biological Principles demand new platforms for regenerative medicine “	Etienne FRADET , Stilla Technologies “The Naica system and its applications” CANCELLED
13.10-13.30	Thomas Pfohl , Institute of Physics, University of Freiburg “Straightforward microfluidic tools for biology and biophysics”	Arnaud Nicolas , MIMETAS “High-throughput platform for rapid TEER measurement of Organ-on-a-Chip endothelial and epithelial tubules”	John Brennan , Biointerfaces Institute McMaster University “A Paper Sensor Printed with Multifunctional Bio/Nano Materials”
13.30-14.00	Lunch		
14.00-14.20	Photo shoot participants		

Programme Afternoon 8 May 2018

Start parallel workshop session & Possibility to join CMi day afternoon program in RLC	
Salle Polyvalente	Demo salle (hall)
Surface functionalization, antimicrobial/antifouling coatings and analytics, detection, imaging.	Cell-material interaction for organ-on-chip devices & regenerative medicine @ the nano scale
Moderator: Peter Miethe	Moderator: no need ? / 2ea only
14.20-14.40	<p>Morteza Aramesh, Laboratory of Biosensors and Bioelectronics, Institute for Biomedical Engineering, ETH Zurich “Carbon coating of nanomaterials for biosensing”</p> <p>Maurizio Ventre, University of Naples Federico II / Centre for Advanced Biomaterials for Health Care, IIT@CRIB, Istituto Italiano di Tecnologia, and Interdisciplinary Research Centre on Biomaterials “Engineering patterned surfaces to control cell and tissue functions through the material-cytoskeleton crosstalk”</p>
14.40-15.00	<p>Anke Schuetz-Trilling, Surfrix NI, “Local surface modification for the life science market” A Paper Sensor Printed with Multifunctional Bio/Nano Materials</p> <p>Giovanna Brusatin, Università di Padova “2D-3D cell culture systems for biomedical studies”</p>
15.00-15.20	<p>Walk to Rolex Center (10 min) for CMi Poster session & Cocktail</p> <p>The doors will be closed during the presentations & the actual timing will certainly deviate from the program</p>
15.20-15.45	Break
15.45-16.00	Philippe Renaud , (http://lmis4.epfl.ch), From the lab to the fab: how simple technologies translate into innovative products
16.00-16.15	Jamie Paik , (https://rri.epfl.ch), Soft Origami Robots
16.15-16.20	Jochen Zimmer , (https://www.nanoscribe.de), Short technical presentation
16.20-17.00	CMi day Poster Session & Cocktail in Rolex Learning Center (RLC)
18.30-19.00	Walking from RLC to restaurant
19.00-23.00	Dinner

Programme Morning 9 May 2018

07.30-8.20	Coffee / tea at booth area	
	<p>Salle Polyvalente</p> <p>Surface functionalization, antimicrobial/antifouling coatings and analytics, detection, imaging.</p> <p style="text-align: center;">Moderator: Marileen Dogterom</p>	<p>Demo salle (hall)</p> <p>Cell-material interaction for organ-on-chip devices & regenerative medicine @ the nano scale</p> <p style="text-align: center;">Moderator: Fredrik Höök</p>
08.20- 08.40	Dmitri Y. Petrovykh , International Iberian Nanotechnology Laboratory (INL), "Practical design and characterization of biofunctionalized surfaces"	Fredrik Höök , Chalmers Univ, "Micro- and Nanofluidics in Biological Nanoparticle Analytics." (application theme; Drug delivery systems & Nanomedicine)
08.40-09.00	Elmar Hartmann , JPK Instruments AG „Modern Techniques of Atomic Force Microscopy (AFM) in Life Sciences"	Hugo Bissig , Federal Institute of Metrology METAS "High accuracy testing of drug delivery devices"
09.00-09.20	Marileen Dogterom , TU Delft / Department of BioNano science, Kavli Institute of Nanoscience, "Building minimal mitotic spindles in artificial confinement"	Joost Lötters , Bronkhorst High-Tech B.V. "MicroCoriolis flow and density sensor for flow and composition measurement in drug delivery systems"
09.20-09.40	Jeff Wood , University Twente (<i>replacing Rob Lammertink</i>). "Transport Phenomena in Structured Charge-Selective Interface Systems"	Marie-Agnès Doucey , Ludwig Institute for Cancer Research, "Memristor Nanowire Sensors for High Sensitivity Detection of markers in Breast Cancer Patient Tumor Tissues"
09.40-10.20	Coffee Break	
10.20-10.50	2 nd keynote: Emmanuel Delamarche , IBM "Microfluidics for point-of-care diagnostics 2.0: from liquid control to security features "	
10.50-11.20	<p>Hugo de Haan, introduction of Science & Entrepreneurship case;</p> <p>Murali Ghatkesar, TU Delft, Alquin Stevens, InnoPhysics, NL</p> <p>"Hollow AFM cantilever for small volume nanofluid sample handling" combined with "Recent developments in digital μPlasmaPrint surface engineering from low volume science to high volume industrial applications"</p>	
11.20-12.00	Coffee Break	
	<p>Salle Polyvalente</p> <p>Surface functionalization, antimicrobial/antifouling coatings and analytics, detection, imaging.</p> <p style="text-align: center;">Moderator: Matthias Lutolf</p>	<p>Demo salle (hall)</p> <p>Lead compound discovery and novel screening methods (such as organoids/organs on a chip) use of solid & fluidic micro/NanoParticles</p> <p style="text-align: center;">Moderator: Wim De Malsche</p>
12.00-12.20	Matthias Lutolf , Institute of Bioengineering, EPFL (section; Tissue Engineering) co-founder spinoff SUN Bioscience	Wim De Malsche , VUB, "Production of monodisperse particles at an industrial scale"
12.20-12.40	Itedale Namro Redwan , Cellink "3D bioprinting of human soft tissues"	Uwe Marx , TissUse GmbH, spin-off TU Berlin (section "novel screening methods") . "Nanoscale aspects of a human multi-organ-chip platform for safety and efficacy testing"
12.40-13.00	Björn Önfelt , Microbiology, Tumor and Cell Biology, Karolinska Institutet, Sweden "Devices and analysis to assess anti-tumour responses of natural killer cells at the single cell level"	Tom Constandse , TNO NL "Intrapreneurship at TNO – Scaling-up single-molecule science to high-throughput technology"
13.00-13.20	Cagri Üzümlü , Surflay Nanotec GmbH "Microsensors for label-free bioanalysis, diagnostics and monitoring biomolecular interactions: Low-Q Whispering Gallery Modes (WGM)"	Albert van den Berg , MESA+/UT Nanotech for Health "Labs, Cells and Organs on a Chip"
13.20-14.40	Poster session & Lunch (13.45 meeting International Scientific Committee / ISC)	
	<p>Posters:</p> <p>Alberta De Capua, PhD student of Italian Institute of Technology (IIT) in Naples</p> <p>Alessandra De Masi, PhD student of Italian Institute of Technology (IIT) in Naples</p> <p>Stephanie Hwu, PhD student ETH Zurich, Non-specific interaction based biosensing</p>	

Programme Afternoon 9 May 2018 (Cont'd)

14.40	Workshop session 2	
	Salle Polyvalente Surface functionalization, antimicrobial/antifouling coatings and analytics, detection, imaging. Moderator: Gregor Thalhammer	Demo salle Human diagnostic devices Moderators: Jonathan M. Cooper & Tony Cass
14.40-15.00	Monika Ritsch-Marte , Medical University of Innsbruck, "Optical and acoustic traps for cell clusters"	Jonathan M. Cooper , University of Glasgow "Rapid, Low Cost Diagnostics for Microbial Assessment in Disease"
15.00-15.20	Iago Pereiro , IBM Zurich Laboratory (Delamarche group) - Zurich "High-efficiency microscale biopatterning on surfaces using hydrodynamic flow confinements"	Tony Cass , Imperial College, UK "Microneedle Sensor Arrays for Minimally Invasive Continuous <i>in vivo</i> Monitoring"
15.20-15.40	Sami Rtimi , EPFL, "Recent developments in uniform films on 2D/3D surfaces leading to quasi-instantaneous bacterial inactivation kinetics"	Samantha Paoletti , CSEM. "Recent advances in non-invasive diagnostics"
15.40-16.00		Francesco Padovani , Nanobiotech Group, CRANN, Naughton Institute, Trinity College Dublin "Nanomechanical Clinical Coagulation Diagnostics and Monitoring of Therapies"
16.00-16.15	Coffee break	
16.15	Plenary Closure @ Salle Polyvalente	