

Microfluidics 2018: New Technologies and Applications in Biology, Biochemistry and Single-Cell Analysis

EMBL CONFERENCE

We have moved our website to embl.org/events. The content below is no longer being updated.

EMBL Courses and Conferences during the Coronavirus pandemic

With the onsite programme paused, many of our events are now being offered in virtual formats.

Registration is open as usual for many events, with back-up plans in place to move further courses and conferences online as necessary. Registration fees for any events affected by the COVID-19 disruption are fully refundable.

More information for participants of events at EMBL Heidelberg can be found [here](#).

Programme

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Day 1 - Sunday 15 July 2018

Time	Speaker
12:00-14:00	Registration
14:00-14:15	Welcome & Opening Remarks
	Session 1 - Single cell/ single organism studies
	Chair: Markus Elsner
14:15-14:45	Single Cell Genomics and the Tabula Muris Steven Quake - <i>Stanford University, USA</i>
14:45-15:00	Microfluidic single-cell chromatin profiling to study emergence of drug resistance in cancer Kevin Grosselin, <i>ESPCI Paris, France</i>

Time	Speaker
15:00-15:20	Coffee break
15:20-15:45	Flash talks on Fundamental Research: Beneyton #29, Kukhtevich #67, Jongen #61 Flash talks on Technology Development: Constantinou #39, Gielen #27, Obst #88, Ostromohov #92, Shvydkiv #109, Heymann #53, Tan #112, Tovar #115
15:45-17:00	Poster Session 1 - even numbers
17:00-20:00	Dinner and World Championship Final

Day 2 - Monday 16 July 2018

Time	Speaker
	Session 1 (cont.)
09:00-09:30	Translating Single-Cell Genomics to the Clinic Alex Shalek, <i>MIT, USA</i>
09:30-09:45	Imaging and Sequencing Single cells Aaron Streets, <i>UC Berkley, USA</i>
09:45-10:15	Reconstructing human organ development using microfluidic-based single-cell transcriptomics Barbara Trautlein, <i>Max Planck Institute for Evolutionary Anthropology, Germany</i>
10:15-10:30	Single cell analysis reveals functional heterogeneity within plasmacytoid dendritic cells and identifies environmental cues that drive type I IFN production Jurjen Tel, <i>Eindhoven University of Technology, The Netherlands</i>
10:30-11:00	Coffee break
11:00-11:30	Elucidating the regulatory mechanisms of myogenic/adipogenic/dermal lineage commitment and differentiation Angela Wu, <i>The Hong Kong University of Science and Technology, Hong Kong</i>
11:30-11:45	Investigating the epigenetic heterogeneity and tumor microenvironment in early prostate tumors at single-cell resolution Ece Eksi, <i>Oregon Health and Science University, USA</i>

Time	Speaker
	Session 2: Droplet-based microfluidics
11:45-12:15	Single-cell analysis with droplet microfluidics David Weitz, <i>Harvard University, USA</i>
12:15-12:30	Cutting edge droplet microfluidic technology for revolutionising antibody discovery and production Dale Starkie, <i>UCB Celltech, UK</i>
12:30-13:00	Microfluidics against microbes Piotr Garstecki, <i>Polish Academy of Sciences, Poland</i>
13:00-14:30	Lunch
14:30-14:45	High-throughput therapeutic protein evolution using phenotypic screening in microfluidic droplets Thomas Fryer, <i>University of Cambridge, UK</i>
14:45-15:15	Droplet-microfluidics in antibody discovery and personalized medicine Christoph Merten, <i>EMBL Heidelberg, Germany</i>
	Session 3: Novel Microfluidic Modules & Applications
15:15-15:45	Electrophoretic Cytometry for Targeted Proteomics Amy Herr - <i>UC Berkeley, USA</i>
15:45-16:00	A high-throughput microfluidic platform to screen live CRISPR edited human cells by surface marker expression David Philpott, <i>University of Toronto, Canada</i>
16:00-16:30	Coffee break
16:30-17:00	Organoids Microfluidic Analytics Platforms (MAP) and Ultrafast Photonic PCR on Chip for Personalized Precision Medicine Luke Lee, <i>National University of Singapore, Singapore</i>
17:00-17:20	Flash talks on Biomedical Applications: Chen #35, Mahler #83, Peñaherrera #94 Flash talks on Diagnostics:Hemmateenejad #52, Roy #100, Folli #46
17:20-18:30	Poster Session 2 - odd numbers
18:30-24:00	BBQ and Party

Day 3 - Tuesday 17 July 2018

Time	Speaker
	Sessin 3 (cont.)
	Deep Phenotyping Enabled by Microfluidics and High-Throughput Quantitative Microscopy
09:00-09:30	Hang Lu, <i>Georgia Institute of Technology, USA</i>
	High throughput error-correction code DNA sequencing: concept, chemistry, microfluidics, and prototype
09:30-09:45	Yanyi Huang, <i>Peking University, China</i>
	Session 4: Diagnostics/ analysis/synthesis/separation
	The Revolution will be Compartmentalized: Synthesis and Analytical Technology to Democratize Drug Discovery
09:45-10:15	Brian Paegel, <i>Scripps Florida, USA</i>
	Sub-pg/mL, Multiplexed Detection of Cytokines on a Mobile-Phone, High Throughput Digital Droplet ELISA
10:15-10:30	Venkata Yelleswarapu, <i>University of Pennsylvania, USA</i>
10:30-11:00	Coffe break
	<i>Biomimetics - attempts to learn from nature</i>
11:30-12:00	Andreas Manz, <i>KIST Europe, Germany</i>
	Peptides and lipid membranes: Permeation, Partitioning, pore formation
11:45-12:15	Petra Dittrich, <i>ETH Zürich, Switzerland</i>
	Optofluidic Platforms for High-Throughput and Precision Measurements in Flow Cytometric Detection
12:00-12:15	Stavros Stavrakis, <i>ETH Zürich, Switzerland</i>
12:15-12:30	Closing Session
12:30	Packed Lunches & Departure