
Thursday 06 December 2018

- 11:00 - 12:45 **Arrival and Registration**
ATC Registration Desk
- 12:45 - 13:00 **Welcome and opening remarks**
ATC Auditorium
- 13:00 - 13:15 **ImageJ Talk**
Curtis Rueden - *Laboratory for Optical and Computational Instrumentation, USA*, Tobias Pietzsch - *Max Planck Institute of Molecular Cell Biology and Genetics, Germany*, Christian Dietz - *KNIME, Germany*
ATC Auditorium
- 13:45 - 15:00 **Session 1 - Light microscopy 1**
Chair: Pavel Tomancak, *Max Planck Institute of Molecular Cell Biology and Genetics, Germany*
ATC Auditorium 1
- 13:45 - 14:15 **Using morphological profiling to extract the most from your images**
Beth Cimini
Broad Institute, United States of America
- 14:15 - 14:45 **To be presented on site** 2
Jeremy Freeman
Chan Zuckerberg Initiative, United States of America
- 14:45 - 15:00 **Quantitative imaging of motile cilia to investigate fluid flows and chirality in the left-right organizer**
Willy Supatto
CNRS - Ecole polytechnique, France
- 15:00 - 15:30 **Coffee break**
ATC Auditorium Foyer
- 15:30 - 18:00 **Session 2 - Machine learning** 3
Chair: Anna Kreshuk - *EMBL Heidelberg, Germany*
ATC Auditorium
- 15:30 - 16:00 **The road to deeper ilastik** 4
Anna Kreshuk
EMBL Heidelberg, Germany

EMBL Conference: From Images to Knowledge with ImageJ & Friends

- 16:00 - 16:15 **Deep Learning meets Topology-preserving Active Contours: towards scalable quantitative histology of cortical cytoarchitecture.** 5
Nico Scherf
Max Planck Institute for Human Cognitive and Brain Sciences, Germany
- 16:15 - 16:30 **Introducing Yaptic: A New Tool for Biologists to Perform Complex Image Segmentation with Deep Learning** 6
Christoph Möhl
German Centre for Neurodegenerative Diseases (DZNE), Germany
- 16:30 - 17:00 **Coffee break**
ATC Auditorium Foyer
- 17:00 - 17:30 **Content-Aware Image Restoration for Light and Electron Microscopy Facilitates Quantitative Data Analysis** 7
Florian Jug
Center for Systems Biology Dresden and Max Planck Institute of Molecular Cell Biology and Genetics, Germany
- 17:30 - 17:45 **Automated Annotation of C. Elegans: How much Training Data is Needed?** 8
Dagmar Kainmueller
Berlin Institute of Health, Germany
- 17:45 - 18:00 **Flash talks (1 slide/2mins each)**
Albert #23 / Botelho #31/ Bujak #35 / Meyenhofer #79 / Schmidt #95
- 18:00 - 19:30 **Poster Session 1: Odd numbers**
ATC Helix A
- 19:30 **Free evening**

Friday 07 December 2018

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|---------------|---|----|
| 09:00 - 10:15 | Session 3 - Light microscopy 2 Chair: Florian Jug - <i>Max Planck Institute of Molecular Cell Biology and Genetics, Germany</i> ATC Auditorium | |
| 09:00 - 09:30 | BigStitcher: Reconstructing high-resolution image datasets of cleared and expanded samples Stephan Preibisch <i>Max Delbrück Center for Molecular Medicine, Germany</i> | 9 |
| 09:30 - 10:00 | NanoJ-SQUIRREL: quantitative mapping and minimisation of super-resolution optical imaging artefacts Siân Culley <i>University College London, United Kingdom</i> | 10 |
| 10:00 - 10:15 | Correlative Light-Electron Microscopy Based High Resolution Nuclear Model of <i>C. elegans</i> Dauer Ella Bahry <i>Max Delbrück Center for Molecular Medicine, Germany</i> | 11 |
| 10:15 - 10:45 | Coffee break ATC Auditorium Foyer | |
| 10:45 - 12:00 | Session 4 - Electron Microscopy analysis Chair: Christian Tischler - <i>EMBL Heidelberg, Germany</i> ATC Auditorium | |
| 10:45 - 11:15 | Mapping and analyzing neuronal circuits with CATMAID software Albert Cardona <i>HHMI Janelia, United States of America</i> | 12 |
| 11:15 - 11:45 | N5, ImgLib2-Cache, BigDataViewer, and Spark: my favorite open-source eco-system for super-large image data Stephan Saalfeld <i>HHMI Janelia, United States of America</i> | 13 |

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- 11:45 - 12:00 **webKnossos: efficient online 3D data annotation** 14
Norman Rzepka
scalable minds GmbH, Germany
- 12:00 - 13:30 **Lunch**
ATC Auditorium Foyer
- 13:30 - 15:00 **5 Parallel Workshops - Session 1**
(See workshop schedule for rooms)
- 15:00 - 15:30 **Coffee break**
ATC Auditorium Foyer
- 15:30 - 17:00 **5 Parallel Workshops - Session 2**
(See workshop schedule for rooms)
- 17:00 - 17:15 **NEUBIAS talk**
Julien Colombelli, IRB Barcelona, Spain
ATC Auditorium
- 17:15 - 17:30 **A natural-language based syntax for animating 3D/4D imaging data** 15
Benjamin Schmid
Friedrich Alexander University Erlangen-Nürnberg, Germany
- 17:30 - 17:45 **Mastodon -- a large-scale track-editing framework for Fiji** 16
Tobias Pietzsch
Max Planck Institute of Molecular Cell Biology and Genetics, Germany
- 17:45 - 18:00 **Flash talks** (1 slide / 2mins each)
Arzt #25 / Cheeseman #41 / Günther #54 / Jain #63 /
Mais #75
ATC Auditorium
- 18:00 - 19:30 **Poster Session 2: Even numbers**
ATC Helix A
- 19:30 - 21:30 **Conference Dinner**
EMBL Canteen
- 21:30 - 00:00 **Conference Party with DJ**
ATC Auditorium Foyer

Saturday 08 December 2018

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|---------------|---|----|
| 09:00 - 10:15 | Session 5 - Atlas projects Chair: Christophe Zimmer - <i>Institut Pasteur, France</i> ATC Auditorium | |
| 09:00 - 09:30 | Deep learning as a tool in microscopy data analysis and digital pathology Carolina Wählby <i>Uppsala University, Sweden</i> | 17 |
| 09:30 - 10:00 | Archives, Resources and Atlases: An OME Perspective on Structuring Data for the Long Haul Josh Moore <i>Open Microscopy Environment/University of Dundee, United Kingdom</i> | 18 |
| 10:00 - 10:15 | The mitotic cell atlas Jean-Karim Hériché <i>EMBL Heidelberg, Germany</i> | 19 |
| 10:15 - 10:45 | Coffee break ATC Auditorium Foyer | |
| 10:45 - 12:00 | Session 6 - Tools and Methods Chair: Josh A. Moore - <i>Open Microscopy Environment/University of Dundee, UK</i> ATC Auditorium | |
| 10:45 - 11:15 | New computational lenses for single molecule super-resolution microscopy Christophe Zimmer <i>Institut Pasteur, France</i> | 20 |
| 11:15 - 11:45 | To be presented onsite Virginie Uhlmann <i>EMBL-EBI, United Kingdom</i> | 21 |
| 11:45 - 12:00 | KNIME Image Processing: Status Quo and Future Directions Christian Dietz <i>KNIME, Germany</i> | 22 |

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- 12:00 - 12:15 **Closing remarks and Poster Prizes**
ATC Auditorium
- 12:15 - 12:45 **Packed lunch and departure**
ATC Auditorium Foyer
- 12:45 **Bus departures downtown and to Frankfurt Airport**