

## MIC Research Day 2018

On July 4<sup>th</sup> 2018, MIC has organized the “MIC Research Day” that took place in the lecture hall of the Department of Infectious Diseases and Pathobiology of the Vetsuisse faculty. This afternoon event was dedicated to scientific lectures with a specific focus on microscopy presented by researchers of the University of Bern and the University of Fribourg plus two technical talks on deconvolution and spinning disc confocal microscopy. Although the climate of the lecture hall suffered from the summerly hot temperatures, the atmosphere was lively thanks to the very well prepared chairs recruited from the PhD student program Cutting Edge Microscopy (CEM). Overall, the MIC Research Day provided the opportunity to acquire knowledge about new and sophisticated techniques and to interact with experts in the field.

## MIC Summer School 2018

The 2<sup>nd</sup> MIC Summer School for the students of the PhD program Cutting Edge Microscopy (CEM) started with the **MIC Research Day** on July 4<sup>th</sup>. This event was followed by the **Students' Day** on July 5<sup>th</sup> and an introduction into the interconnection between microscopy related problems and solutions offered by the service unit **Science IT Support** ([www.ScITS.unibe.ch](http://www.ScITS.unibe.ch)) of the University of Bern on July 6<sup>th</sup>.

On July 5<sup>th</sup>, the 20 students of the CEM PhD program, Prof. Dr. Nadia Mercader Huber, PD Dr. Marlene Wolf, Dr. Yury Belyaev and PD Dr. Ruth Lyck, met on the Gurten for the Students' Day of the 2<sup>nd</sup> MIC summer school. After a short foreword by the programs' scientific coordinator, Prof. Dr. Mercader Huber, all students introduced themselves and their projects in 90 second flash presentations. In two sessions, some PhD students gave detailed presentations about their projects followed by in-depth discussions with their peers.

On July 6<sup>th</sup>, PD Dr. Sigve Haug, head of ScITS, introduced the topic of IT challenges and IT support in the context of microscopy. In addition, the new BioImage specialist, Dr. Guillaume Witz, attended the workshop and introduced himself. Next, the every-day IT challenges of life science researchers were discussed in small groups and then presented to all. The three most important challenges named are 1) improvement of IT skills, 2) big data management and 3) automation of image analysis.

Overall, the MIC summer school 2018 was a great success in terms of scientific discussions and personal exchange, sharing ideas and getting to know each other better.

## Meeting of the Swiss Microscopy Core Facility Managers 2018

On August 31<sup>st</sup> 2018, representatives of the Swiss Microscopy Core Facilities met at the University Zürich, Campus Irchel. Dr. Yury Belyaev, PD Dr. Fabian Blank and PD Dr. Ruth Lyck represented the MIC of the University of Bern. Most important take home messages were: 1) Finding an appropriate data repository for the data management plan requested by SNSF is still a difficult issue resembling a “data jungle”. 2) [c4science.ch](http://c4science.ch) is an open access tool that offers suitable solutions as an online platform for collaborative projects. 3) Swiss Network of Microscopy Core facilities is now a section of the Swiss Society of Microscopy (SSOM).



## New Member of the MIC Commission

On September 1<sup>st</sup> 2018, Dr. Guillaume Witz has joined the Science IT Support (SciTS) unit of the University of Bern with the specific task of supporting MIC scientists. He obtained an M.Sc. in physics and a Ph.D. in biophysics from EPFL. His initial research explored the statistical and biological properties of DNA molecules with complex topologies using atomic force microscopy and molecular dynamics simulations. With the intention of further shifting his research towards in vivo biology, he then moved as a postdoctoral fellow to the Department of Molecular and Cellular Biology at Harvard University where he studied the regulation of the bacterial cell cycle using light microscopy. More specifically, Guillaume used multi-dimensional imaging and 3D reconstructions to explore bacterial chromosome dynamics. He then joined the Biozentrum Basel where he further explored cell cycle regulation using a combination of microfluidics and time-lapse microscopy to acquire large datasets of single-cell cycles. He developed software solutions and pipelines to allow for the automated processing of such large and complex microscopy datasets using tools such as high-performance computing (HPC) and deep learning. Guillaume is enthusiastically looking forward to put his experience at the service of the MIC community. The MIC commission elected Guillaume as a new member of the MIC commission on August 24<sup>th</sup> 2018. With his expert knowledge in the areas of Biolmaging and Big Data in microscopy, Guillaume will contribute to the quality of microscopy at the University of Bern.

## Call for communication of events and presentations

The MIC aims to improve collaborations between researchers of the University of Bern. Please announce lectures of team members of guests to the [MIC coordinator](#) for publication on the MIC homepage and the MIC newsletter!

## Presentations, Trainings, Workshops, Demonstrations – upcoming events at the University of Bern

### September 12, 2018

Demonstration: Olympus FV3000 confocal microscope. More information [here](#).

### September 18, 2018

Training: Basics of confocal microscopy. More information [here](#).

### October 23 – 25, 2018

Training: Introduction to Correlative Light and Electron Microscopy (CLEM). More information [here](#).

### November 11, 2018

Workshop: Advanced Histology and immunolabeling for paraffin and cryo-embedding and nonembedded cell cultures. More information [here](#).

### November 30, 2018

MIC Symposium. This year's topic is "From Organoids to Organisms – Multiscale imaging". The speakers of the MIC Symposium are listed on the MIC homepage [here](#).

## Trainings, Workshops, Demonstrations – further events in Switzerland or abroad

### September 12 - 14, 2018, Berlin-Adlershof, Germany

24<sup>th</sup> International Workshop on "Single Molecule Spectroscopy and Super-resolution Microscopy in the Life Sciences". Details and more information see [www.single-molecules.org](http://www.single-molecules.org).



**September 24 – 26, 2018, Ulm, Germany**

15<sup>th</sup> Confocal Raman Imaging Symposium. Speakers from universities and industry will talk about several aspects of modern Raman imaging. In addition, poster sessions and equipment demonstration will give a detailed introduction to the operational principles and instrumental configurations relevant to confocal Raman microscopy. More information [here](#).

**October 16 – 19, 2018, Edinburgh, UK**

NEUBIAS, the Network of European BiImage Analysts ([www.neubias.org](http://www.neubias.org)), offers a training school on BiImage Analysis for Early Career Investigators in life sciences. More information [here](#).

**November 5 - 7, 2018, Heidelberg, Germany**

“Labeling & Nanoscopy 2018” aims at bringing together experts in fluorescence and labeling chemistry with those designing and applying new concepts of far-field optical nanoscopy. This meeting will take place in the German Cancer Research Center in Heidelberg. More information [here](#).

**Next MIC Commission meeting**

The next **MIC Commission meeting** will be held on Thursday, December 13 at 1:15 pm. Location: Institute of Anatomy, Seminar room, Bühlstrasse 26, 3012 Bern. This is a quarterly meeting of the MIC Commission members. Meeting dates are listed [here](#).

**Previous MIC newsletters are available to you for download [here](#).**

