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**UNIVERSITÄT
BERN**

MIC Workshop:	Bioimage Processing with Python & friends
Date:	July 11 - 15, 2022
Time:	9 am – 5 pm
Location:	Meiringen, Parkhotel du Sauvage
Trainer:	Dr. Guillaume Witz, Microscopy Imaging Center (MIC), Science IT Support (SciTS), University of Bern (UniBE), Switzerland
Organizer:	Microscopy Imaging Center (MIC, www.mic.unibe.ch) and Science IT Support (SciTS, www.scits.unibe.ch). Supported by the PhD program Cutting Edge Microscopy (CEM)
Max number of participants:	15
Registration:	until June 4 , extended to June 15 , 2022, here
Costs:	CHF 500 for students enrolled in the CEM program and PhD students registered at the Graduate School for Cellular and Biomedical Sciences (GCB) (5 spots reserved), CHF 900 for UniBE members, CHF 1'100 for non UniBE academics, CHF 1600 for industry
Target audience:	PhD students and postdocs who want to learn how to perform image processing in the Python eco-system. Pre-requisites: scripting or coding experience (e.g. in Fiji macros, R etc.)
Credits:	Certificate of attendance. On request, PhD students of the CEM program can obtain 3 ECTS for this course after passing an oral examination.
Background:	Modern microscopy and imaging methods produce increasingly complex and large datasets whose analysis is only possible thanks to automated computational solutions. The Python programming language has become a central tool for such solutions because of its ease of use and central place in the Machine Learning area. Additionally, Python has a broad eco-system of tools making it possible to carry out entire imaging projects, including image processing, visualization, and data modeling in a single environment.
Content:	This intensive one-week workshop aims to help scientists getting started using the Python eco-system for their bioimaging projects. In addition to course time, participants will also have some time to work on their own projects, just getting started or continuing an existing one, and will be able to discuss them with each other and the instructor.
Learning outcome:	Participants will know how to use the Python eco-system for the various aspect of image analysis: importing and handling of images, image processing (filtering, segmentation, advanced deep learning methods), interactive visualization etc. Participants will also learn technical aspects such as using a computational notebook, setting up a project environment, publishing code to GitHub etc.