MIAP Workshop Program 2019

CARE: Content-aware image restoration – A workshop for machine-learning-based image restoration

Motivated by the success of machine-learning for image processing, such approaches have recently been shown to be powerful alternatives to traditional image restoration algorithms for microscopy data. This workshop will provide an introduction to CARE: Content-aware image restoration (https://www.nature.com/articles/s41592-018-0216-7), a deep learning-based approach to denoising and reconstructing microscopy images. We will discuss the concepts behind CARE, its use cases and the challenges that come with it. In the tutorial part of the workshop, participants will be taught how to set-up, train and validate CARE models using the programming language Python.

November 12th 2019

Friedrich Miescher Institute for Biomedical Research (FMI)

Rooms 5.30 and 5.39

Maulbeerstrasse 66, 4058 Basel, Switzerland

Organization: Microscopy and Image Analysis Platform (MIAP), University of Freiburg
Friedrich Miescher Institute (FMI)

Teachers: Florian Jug (Max Planck Institute of Molecular Cell Biology and Genetics)
Markus Rempfler (Friedrich Miescher Institute)
Tim-Oliver Buchholz (Max Planck Institute of Molecular Cell Biology and Genetics)

Tuesday, November 12th 2019, 9:00 – 18:00	
09:00 – 10:00	**Workshop welcome & setting up the environment for CARE**
10:00 – 10:30	**COFFEE BREAK**
10:30 – 11:00	**Seminar: Machine-learning basics**
11:00 – 11:45	**Seminar: Key note talk by Florian Jug**
11:45 – 12:45	**LUNCH BREAK**
12:45 – 18:00	**Tutorial / hands-on (*)**

- **Registration is free of charge.**
- **(*) There are only 12 spots available for the tutorial / hands-on session in the afternoon. Participants are selected based on their letter of motivation in case the organizers receive more than 12 applications.**
- **It is possible to only register for the seminar part in the morning, which is not subject to this limitation.**
- **Participants of the tutorial /hands-on session are expected to have basic knowledge of the programming language Python.**

Please note: There is no catering during lunchtime. Food options around FMI will be pointed out. For more information, please contact MIAP: https://miap.eu   info@miap.eu