

Multiuser Collaboration from Flat Screen to Virtual Reality

by arivis and ACQUIFER

Recent developments in many and diverse state-of-the-art microscopy techniques (i.e. super-resolution, light sheet, SEM) provide tremendous potential while creating new challenges all the same. One often-encountered challenge is the growing amount of data, increasing file sizes and the indicative necessity to work on novel solutions in data management and further data processing, which can be applied in the routine research environment.

This workshop will highlight how a multiuser platform like the ACQUIFER HIVE can be engaged in future imaging workflows- the arivis Virtual Reality (VR) Application for collaboration. Both, arivis and ACQUIFER, work on solutions to overcome the daily routine problems in large image data management and handling. In this context, we are very glad to invite you in cooperation with arivis AG and ACQUIFER, a division of DITABIS AG to a workshop that puts fast, flexible and time-efficient data management and large image data handling at center stage.

November 19th – 20th 2019

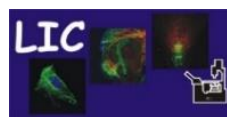
Albert-Ludwigs University Freiburg
Center for Biological Systems Analysis (ZBSA), Life Imaging Center (LIC)
Habsburgerstr. 49, 79104 Freiburg im Breisgau

Organization: Microscopy and Image Analysis Platform (MIAP), University of Freiburg

Teacher: Tamara Manuelian (arivis), Bettina Göppert (ACQUIFER)

Day 1: November 19th, 09:00 – 17:30		
09:00 – 09:15	Welcome and Workshop Introduction	
09:15 – 09:45	ACQUIFER HIVE – Big Image Data Acquisition and Transfer	
09:45 – 10:00	COFFEE BREAK	
10:00 – 12:00	Introductory Talk and arivis Vision4D Collaboration in VR- Live Demo	
12:00 – 12:30	ACQUIFER HIVE - How to run software applications in a multi-user environment	
12:30 – 13:00	BREAK	
13:00 – 15:00	Hands-on Session arivis Vision4D and arivis InViewR	“Slot 1”
15:00 – 15:15	COFFEE BREAK	
15:15 – 17:30	Hands-on Session arivis Vision4D and arivis InViewR	“Slot 2”
Day 2: November 20th, 09:00 – 12:00		
09:00 – 12:00	Hands-on Session arivis Vision4D and arivis InViewR	“Slot 3”

- For a detailed overview of workshop and session content, please see page 2.
- We won't offer lunch for this workshop. However, there are plenty of options in the vicinity of the workshop venue.
- For more information, please contact MIAP: <https://miap.eu> info@miap.eu



MIAP Workshop Program 2019

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Detailed overview of hands-on sessions

Working with arivis Vision4D- how to get started

I. Data Transformation and pre-processing of image data

- a. Concept of arivis core technology
- b. arivis large data handling-general strategy
- c. Stitching and Volume Fusion, Background correction and filter pre-processing

II. Visualization: strategies, tools and advanced functions

- a. Color handling
- b. 3D/4D Renderings
- c. Best practise: Multi-view, bookmarking, history, ROI clipping and more
- d. Create HD screenshots and animated movies

III. Quantification in *arivis Vision4D* in 2D, volumes or time series

- a. Manual annotations, markers and editing
- b. arivis pipeline for automated batch image analysis
- c. Results presentation-working with the object data table
- d. Tracking of objects over time

IV. Workflow integration and collaboration even in virtual reality

- a. arivis platform- working on 2D flatscreen, in virtual reality with *arivis InViewR* or via the web
- b. Generic Export/Import to other software
- c. Extensions
- d. Quantification and Tracking in *arivis InViewR*
- e. Shared sessions with *arivis InViewR*- Collaboration

