

## General Info

**Time and Date:** June 14-17

### Lectures:

**Via Zoom:** <https://kaust.zoom.us/meeting/register/tJAIf-CsqDksGNbABqh81ZYBPJatVCs9VhZr>

### General Time Table

Morning 9.00 – 12.30 lectures plus 15 min coffee break

Lunch 12.30 – 13.30

Afternoon 13.30 – 19.00

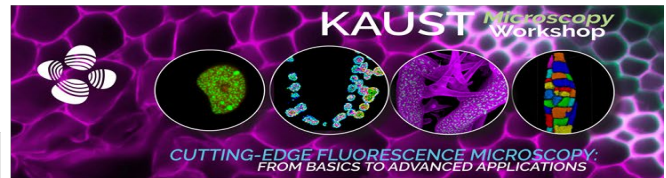
Parallel sessions with groups of 3-4

Times are KSA local times:

1 hour ahead of Europe

5 hours behind Singapore

7 hours ahead US



## ***Detailed program***

### **1<sup>st</sup> day: Monday June 14**

Morning –

Lectures

Chair Monika

8.30-9.30- Lecture 1

**Graham Wright**, Agency for Science, Technology and Research (A\*STAR). Singapore  
Microscopy fundamentals and imaging: Microscope Optics, Confocal

9.30-10.30 -Lecture 2

**Joachim Goedhart**, Molecular Cytology; University of Amsterdam. The Netherlands  
Fluorescence and fluorescence probes

10.30-10.45

**Coffee break**

10.45 -11.45- Lecture 3

**Alexis Maizel**, Cell and Developmental Plant Biology; University of Heidelberg. Germany  
Light sheath microscopy

11.45-13.00

**Introduction by the selected applicants and discussion**

Each selected applicant should give a 2 min overview about their research question and which microscopy technologies are relevant for their projects with the following order:

13.00-14.00

**Lunch**

Afternoon-

14.05-14.20

Chair Ikram

**Ebtihaj Al Bukahri**, IAC core lab

Introduction to Zen Software

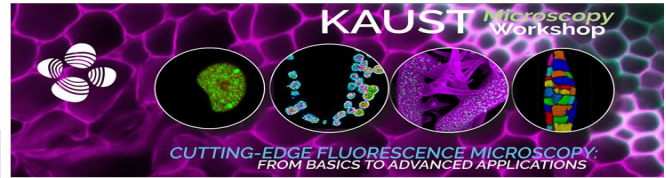
14.20-14.35

**Nouf Alsharif**, Leica Microsystems

Introduction to Leica LAS X –

15.00-19.00

Practical sessions



## 2<sup>nd</sup> day: Tuesday June 15

Morning –

Lectures:

Chair Louai

8.30-9.30- Lecture 1

**Graham Wright**, Agency for Science, Technology and Research (A\*STAR). Singapore.  
Advanced imaging technologies: Super-resolution

9.30-10.30- Lecture 2

**Weimiao Yu**, Computational & Molecular Pathology Lab (CMPL). National University of Singapore (NUS). Singapore.  
3D segmentation

**10.30-10.45**

**Coffee break**

10.45-11.15- Lecture 3

**Thomas Theussl**, Kaust Visualization Core Lab. KAUST.  
3D reconstruction with Avizo

11.15-11.45 Lecture 4

**Rachid Sougrat**. Imaging and Characterization Core labs. KAUST.  
The quest for better resolution

11.45- 12.15 Lecture 5

**Jens Peter Gabriel**, Leica Microsystems  
Tau-STED: Nanoscopy meets Lifetime.

12.15- 12.45 Lecture 6

**Klaus Weisshart**, Zeiss  
ELYRA 7 SIM<sup>2</sup> - Resolve structures down to 60 nm  
Double the resolution without losing the advantages of SIM or Lattice SIM of ELYRA 7

12.45-13.30

**Lunch**

Afternoon –

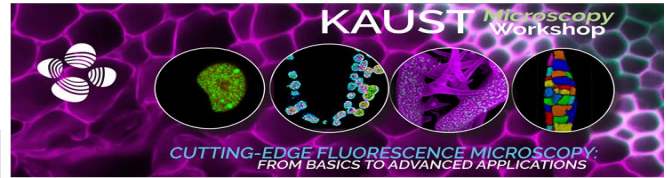
13.30-16.30

Hands-on session

17.00-18.00

Chair Ikram

Lecture 4



**Kevin Eliceiri**, Center for Open Bioimage Analysis. The University of Wisconsin-Madison.  
The USA.

Bioimage analysis

### 3<sup>rd</sup> day: Wednesday June 16

Morning -

Lectures:

Chair, Ikram

8.30- 9.30- Lecture 1

**Thorsten Wohland**, Department of Biological Sciences; National University of Singapore.  
Singapore

Fluorescence Correlation and Cross-Correlation Spectroscopy (FCS/FCCS)

9.30-10.30 Lecture 2

**Mark Hink**, Molecular Cytology; University of Amsterdam. The Netherlands

FCS in plants

10.30-10.45

**Coffee Break**

10.45-11.30 Lecture 3

**Cicerone Tudor, Zeiss**

Biomolecular Dynamics and interactions by using ZEISS confocal advanced imaging  
techniques (FRAP, FRET, FCS)

11.30-12.00

**General Discussions**

**12.00-13.00**

**Lunch**

Chair Ikram and Gwen

13.00-14.00 Lecture 4

**Dorus Gadella**, Molecular Cytology; University of Amsterdam. The Netherlands

Fluorescence Lifetime imaging: basics, instrumentations and applications

14.00-15.00 Lecture 5

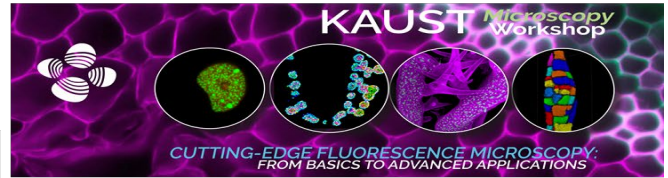
**Yvonne Stahl**, Developmental Genetics; Heinrich Heine University Düsseldorf. Germany.

Fluorescence Lifetime Imaging in plants (FLIM) I

15.00-16.00 Lecture 6

**Yuchen Long**, Department of Biological Sciences, National University of Singapore

Fluorescence Lifetime Imaging in plants (FLIM) II



16.00-16.30

**Coffee break**

Chair Monika

16.30 -17.30 Lecture 7

**Ross Sozanni**, Synthetic and Systems Biology Cluster. NC State University. The USA.

FCS, NetB, RISC in plants

**4<sup>th</sup> day: Thursday June 17**

Chair Shyam

11.00- 11.45

**Fabian Jolmes, Picoquant**

Rapid FLIM

11.45-12.30

**Luis Alvares**, Leica Microsystems

Fast FLIM

12.30-13.30

**Lunch**

13-30-17

Practical sessions