

## Organization

The following partners contribute to the organization of the course.

**Prof. Michael Kühl**

**Main organizer**

(University of Copenhagen)

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**Dr. Thomas R. Neu**

(UFZ Magdeburg)

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**Prof. Harald Horn**

**& Dr. Michael Wagner**

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**Dr. Cristian Picioreanu**

(Delft University of Technology)

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## Registration

Please send your application including CV and a motivation letter (max. 1/2 page) as a single PDF to:

[mkuhl@bio.ku.dk](mailto:mkuhl@bio.ku.dk)

**Application deadline:**  
**August 15<sup>th</sup>, 2017**

Confirmation of acceptance:  
September 1<sup>st</sup>, 2017

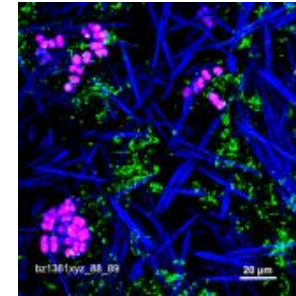
To provide a high-value course, including hands-on practice and demonstrations, the **number of participants is limited to 16.**

This year the course is introducing the EvoBot platform. Details are available at <https://blogit.itu.dk/evoblissproject/>.

## Course Fee

The **course fee is 750 €** (incl. taxes) and covers course materials as well as coffee, tea and lunch breaks, and 1 course dinner.

Participants are in charge of arranging and financing their travel and accommodation in connection with the course.

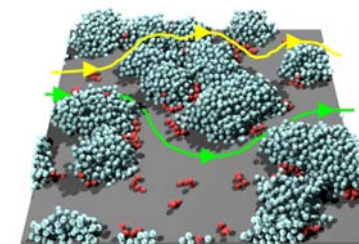


**12<sup>th</sup>**

## Advanced Biofilm Course

October 9 - 14, 2017

Department of Biology  
University of Copenhagen  
Denmark



## Scope

In 2005, within the EC project PHOBIA, the idea came up to offer **an intensive course on theoretical and practical basics in biofilm research with a focus on giving participants hands-on experience.**

The aim of the course is to explore given biofilms with different methods to gain information about their structure and function. The course aims to teach major tools used in biofilm research: biofilm imaging, microsensor techniques and mathematical modelling.

**The course is intended for PhD students and post-doctoral researchers in microbiology, environmental technology, bioengineering and related areas, who are going to use this combined approach for characterisation of their own microbial biofilms.**

The course is a hands-on course. Attendees should feel free to ask the organisers whether their personal samples could be analysed or not.

**Please bring your own laptop computer.**

## Topics

### Cultivation of Biofilms

- growth devices and reactors
- processes (e.g. substrate metabolism)
- development (e.g. growth and decay)

### Microsensors

- measuring substrate gradients, diffusion and reaction kinetics
- theoretical and practical aspects of micro-environmental analyses

### Biofilm imaging

- microscopic imaging with fluorescence microscopy
- theory and application of optical sectioning by means of confocal laser scanning microscopy (CLSM)
- digital image analysis and quantification
- optical coherence tomography (OCT)

### Biofilm modelling

- biofilm modelling principles, building blocks and applications
- computer practice with 1-d, 2-d and 3-d models

More details of past courses can be found at: <http://www.biofilms.bt.tudelft.nl>

## Location



### Marine Biological Section

Department of Biology

University of Copenhagen

**Strandpromenaden 5, DK-3000 Helsingør**

**DENMARK**

