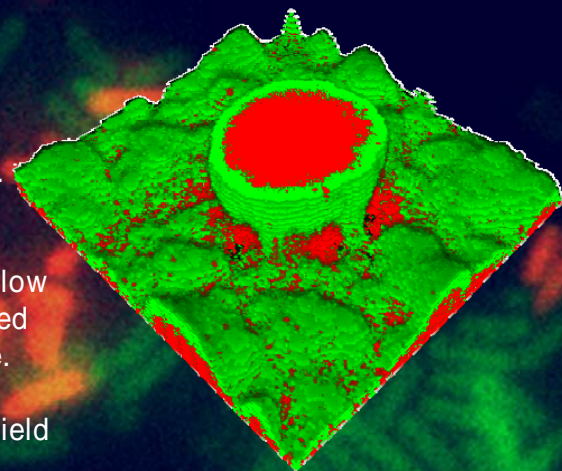


# Medical Biofilm Techniques

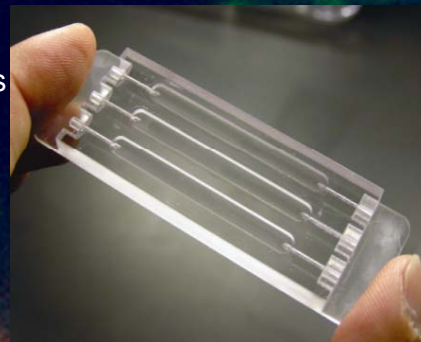
## Introduction

The Technical University of Denmark is offering a laboratory course teaching state of the art techniques in biofilm research. The course is focused on microbial biofilms in the medical scenario with examples from urinary tract infections to cystic fibrosis. The techniques include setup and running of biofilm flow cell systems, Fluorescence in situ hybridization, various advanced imaging techniques, image analysis, flow cytometry, and more. The course will be partly practical with hands-on exercises complemented with lectures by prominent researchers in the field of medical microbiology and microbial biofilms.



## Content

- Biofilm flow cell setup and operation
  - Manipulation and monitoring of growing biofilms
  - Antibiotic treatment of biofilms
  - Viability assessment
  - On-line measurements of oxygen in biofilms
  - Harvesting of biofilms
- Biofilm micro titer tray assays
- Confocal microscopy
- Fluorescence microscopy
- Time-lapse (confocal) microscopy
- Flow cytometry / cell sorting
- Atomic force microscopy
  
- Image processing:
  - COMSTAT analysis
  - Cellstat analysis (demonstration)
  - Image preparation and presentation (Imaris)



## Who can attend

The course is open to Ph.D. students and other interested individuals, e.g. from industry or academia. A basic knowledge of microbiology and laboratory techniques is preferred.

## When

Aug. 22. – Aug. 29. 2009 (all days included)

## 5 ECTS Credits

## Teachers

Assist. Prof. Janus Haagensen  
Assoc. Prof. Anders Folkesson  
Assoc. Prof. Claus Sternberg  
And invited guest speakers

## Course Fee

DKK 5,000 for participants from academia  
(PhD students from Denmark free)  
DKK 10,000 for participants from industry  
Course fee does not include accommodation or meals

## Deadline

May 1., 2009



## Contact:

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