

BioPhotonics Ph.D. course 2019

Monday January 21– Friday January 25 5 ECTS Points

DaMBIC & MEMPHYS, University of Southern Denmark, Odense Campus, Denmark

Organized by: DaMBIC, Danish Molecular Biomedical Imaging Center & Nikon

Jonathan R. Brewer & Vita Solovyeva

Venue: MEMPHYS common room and labs

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Monday January 21, 2019

08:00	-	09:30	General introduction to microscopy and Fluorescence	Lecture
09:30	-	10:30	Confocal laser scanning microscopy	Lecture
10:30	-	11:00	Coffee break+Announcement of projects	
11:00	-	11:30	Two photon confocal microscopy	Lecture
11:30	-	12:30	Lunch Break	
12:30	-	13:30	Image Analysis	Lecture
13:30	-	18:00	Microscopy Practicals	Labs

Tuesday January 22, 2019

08:00	-	09:00	Super Resolution and FLIM microscopy	Lecture
09:00	-	10:00	FRAP/FLIP	Lecture
10:00	-	10:30	Coffee break	
10:30	-	11:30	Correlation methods FCS and RICS	Lecture
11:30	-	12:00	Imaging in vascular pharmacology and physiology	Lecture
12:00	-	13:00	Lunch Break+Choosing individual projects	
13:00	-	13:10	Teams for projects+materials hand-out	
13:10	-	17:30	Microscopy Practicals	Labs

Wednesday January 23, 2019

08:00	-	09:00	CARS	Lecture
09:00	-	10:00	Live cell imaging	Lecture
10:00	-	10:30	Coffee break	
11:00	-	12:00	kICS/PALM	Lecture
12:00	-	12:40	Lunch Break	
12:40	-	13:00	Commercial presentation	
13:00	-	17:30	Microscopy Practicals	Labs
18:00	-	21:00	Dinner in town	

Thursday January 24, 2019

08:30	-	12:00	Project	Labs
12:00	-	13:00	Lunch Break	
13:00	-	18:00	Project	Labs

Friday January 25, 2019

08:30	-	10:00	Presentation preparation	Practical
10:00	-	10:30	Coffee break	
10:30	-	12:00	Presentation preparation	Practical
12:00	-	13:00	Lunch Break	
13:00	-	16:00	Presentations and wrap up	Lecture

FLIM	Fluorescence-lifetime imaging microscopy
kICS	k-Space Image Correlation Spectroscopy
PALM	photoactivated localization microscopy
STED	Stimulated emission depletion microscopy
CARS	Coherent Anti-Stokes Raman Scattering
FRAP	Fluorescence recovery after photobleaching
FLIP	Fluorescence Loss in Photobleaching
FCS	Fluorescence Correlation Spectroscopy
RICS	Raster Imaging Correlation Spectroscopy

