

Program: 4th National PhD Conference in Medical Imaging

Jointly organized by MedIm – Norwegian Research School in Medical Imaging and MI Lab – Medical Imaging Laboratory for Innovative Future Healthcare.

Trondheim, 28-29 November 2012

28 November:

08.00-10.00 Registration, mounting of Poster Exhibition

10.00-10.15 Welcome Address: Dean Stig Slørdahl, Faculty of Medicine, NTNU

10.15-12.15 **BRAIN**

Invited speaker: Alan Koretsky, NIH: *Detecting Neural Plasticity with MRI*

Five PhD Candidate Presentations:

Papp, Eszter, CMBN, UiO: *First generation Waxholm atlas of the Sprague-Dawley rat brain*

Vallee, Emilie, Dept of circulation and medical imaging, NTNU: *3D functional MRI: Finding the best candidate sequence in terms of sensitivity and specificity*

Lebedev, Alexander, Centre for Age-related Medicine, Stavanger University Hospital: *Sparse multivariate classification of patients with Alzheimer's and dementia with Lewy bodies using high-dimensional cortical thickness measurements: two-cohort study*

Judit Haász, Dept. of Biological and Medical Psychology, UiB: *Fluid intelligence and information processing speed are associated with white matter microstructure in major anatomical pathways*

Hallvard Røe Evensmoen, Dept. of Neuroscience, NTNU: *The hippocampal head integrates proximal- and distal landmarks: an fMRI study*

12.15-13.00 First poster session

13.00-14.00 Lunch

14.00-16.00 **CANCER**

Invited Speaker: Tom Scheenen, Radboud University Nijmegen Medical Centre: *Advanced Magnetic Resonance in clinical cancer research - brain and prostate*

Four PhD Candidate Presentations:

Esmaili, Morteza, Dept. of circulation and medical imaging, NTNU: *³¹P MRS of basal- and luminal-like breast tumor xenografts in vivo and in vitro*

Husby, Jenny Aa., Dept of Radiology, HUS & Dept. of Surgical Sciences, UiB: *Value of preoperative FDG-PET/CT in endometrial carcinomas. A pilot study*

Mathiassen, Kim, Dept. of informatics, UiO: *Estimation of biopsy needle tip in 2D US images*

Rusten, Espen, Dept. of medical physics, OUS: *Dynamic ¹⁸FDG-PET and tracer kinetic analysis of soft tissue sarcomas*

Invited Speaker: Tore Skotland, Centre for Cancer Biomedicine, The Norwegian Radium Hospital, OUS: *Nanoparticles for cancer imaging and therapy: What is needed to bring them into common clinical use?*

16.00-16.15 Short break, coffee and snacks

16.15-17.30 **INNOVATION**

Introduction: Olav Haraldseth, MI Lab, NTNU

Speakers:

Sigmund Frigstad, GE Vingmed.

Svein Arne Aase, GE Vingmed Ultrasound
Torbjørn Hergum, Aurotech Ultrasound AS
Lasse Løvstakken, NTNU
Kyrre Emblem, The Intervention Centre, OUS and UiO

17.30-18.30 Break, joint departure from hotel at 18.15

18.30-23.00 Social event and informal dinner at ROCKHEIM

29 November:

09.00-11.00 **HEART**

Invited speaker: Lars Åke Brodin, STH/KTH, Stockholm: *Quality control of imaging systems and ideas for new imaging tools*

Five PhD Candidate Presentations

Espe, Emil, Institute for Experimental Medical Research, OUS and UiO: *High-Resolution MR Phase Contrast Velocimetry in the Assessment of In Vivo Contractility in the Infarcted and Healthy Heart*

Fadnes, Solveig, MI Lab and Dept. of Circulation and Medical Imaging, NTNU: *Shunt quantification in congenital heart disease based on two-dimensional speckle tracking*

Denaire, Bastien, MI Lab, NTNU: *A novel approach for reducing Multi Line Transmission cross talks using 2D transducer arrays*

Sarvari, Sebastian I., Dept of Cardiology/Inst. for surgical research, OUS, and UiO: *Layer-Specific Quantification of Myocardial Deformation by Strain Echocardiography May Reveal Significant Coronary Artery Disease in Patients with Non-ST Elevation Acute Coronary Syndrome*

Birkeland, Åsmund, UiB, *Illustrative Flow Visualization from 3D Doppler Ultrasound*

Invited speaker: Joakim Sundnes, Simula Research Laboratory, Oslo: *Computational models of electro-mechanical interactions in the infarct-injured heart.*

11.00-11.30 Keynote Speaker on Innovation: Bjørn Olstad, Microsoft/Fast

11.30-12.30 Lunch

12.30-14.30 **ADVANCED BIOMEDICAL MICROSCOPY**

Invited speaker: Rainer Heintzmann, Institute of Physical Chemistry, Jena: *Recent developments in high resolution fluorescence microscopy*

Five PhD Candidate Presentations:

Vindedal, Gry, Centre for Molecular Medicine Norway, UiO, *In vivo two-photon laser scanning microscopy of brain fluid dynamics*

Olsvik, Hallvard, Molecular Cancer Research Group, Inst. of Medical Biology, UiT: *FYCO1 mediates microtubule-dependent transport of autophagosomal vesicles through interaction with LC3B, Rab7 and kinesins*

Eggen, Siv, Department of Physics, NTNU, *Ultrasound-mediated delivery of nanoparticles in cancer tissue*

Røkke, Gunvor, Dept. of Biotechnology, NTNU: *A study of G-quadruplex DNA using optical tweezers and dynamic force spectroscopy*

Frisk, Michael, Institute for Experimental Medical Research, OUS and UiO: *Variable t-tubule density and excitation-contraction coupling in rat atrial cardiomyocytes*

Invited speaker: Frode Skjeldal, University of Oslo: *Live cell imaging, techniques and methods*

14.30-15.30 Second Poster Session

15.30-16.00 Closing Lecture - Eivind Andersen, Key Account Manager, NTNU Technology Transfer AS: *Impact: How can the TTOs contribute?*

16.00-16.15 Conference closing, Prizes and Awards