

**Annual meeting for the BIOMEP doctoral programme**

**Dates: 27 feb – 1 mars, 2019**

**Place: AF Borgen, Lilla Salen**

**Lund University, Lund, Sweden**

**Wednesday 27th February – at Genombrottet LTH, *OBS only for PhD students***

15.00-19.00 Workshop

*“Presentation skills” given by the Academic development unit at LTH, LU*

*Voice & body and pitch presentations. Informal, followed by drinks and dinner.*

**Thursday 28th February – at AF Borgen, Lilla Salen**

8.00-8.45 Registration

8.45-9.00 Opening

9.00-9.40 Keynote: Professor Karl Åström, Lund University, director AIML Title *AI and Machine Learning – the future in medical diagnostics?*

9.40-10.20 Student presentations *“Molecular, cell and tissue imaging”* (2 x 20 min)

Session Chair: Gustavo Orozco, Javier Milagro, (Support Hanna Isaksson)

Lingwei Huang: *“Thickness measurement of calcified cartilage with micro-computed tomography”*

Sumanta Samanta: *“Engineering conductive nano materials for imaging and tissue engineering”*

*10.20-10.40 Coffee break*

10.40 – 12.00 Student presentations *“Musculoskeletal Biomechanics”* (4 x 20 min) Session Chairs: Yike Huang, Jaakko Syrjälä, (Support Jari Hyttinen)

Joeri Kok: *“The proximal femur under fall loading, an ex vivo against in silico comparison of regions under compression and tension”*

Thomas Notermans: *“Numerical investigations of collagen fibre re-orientation in healing rat Achilles tendon”*

Gustavo Orozco: *“Shear strain and fluid velocity-driven mechanobiological knee joint models can predict local cartilage adaptation after ACL injury and reconstruction: numerical predictions compared with longitudinal changes in T1ρ and T2 maps.”*

Amir Esrafalian: *“A 12 degrees of freedom musculoskeletal model combined with a muscle force driven fibril-reinforced poroviscoelastic finite element model”*

*12.00-13.00 Lunch*

13.00-14.00 Student presentations *“Neuroimaging and modeling”* (3 x 20 min)

Session Chair: Dao Nguyen, Vahid Farrahi, (Support Timo Jämsä)

Barbara Genocchi: *“Regulatory role of astrocytes in a neural network model”*

Golestan Karami: *“Predicting tumor grade and survival of brain tumor patients using DTI texture analysis in SVM”*

Ruhunur özdemir: *“White matter fibre orientation of anterior nuclei of thalamus and its surrounding substructures in DW-MRI”*

*14.00-14.20 Coffee break*

14.30-17.30 Excursion to MAX-IV and ESS, incl. tour and Keynote lecture

Keynote: Dr. Rajmund Mokso, MedMAX, MAX-IV, Lund University

Title *Visualising the structure and dynamics of biological tissue with X-ray tomographic microscopy*

19.00-23.00 Dinner and party

BME Department, E-house, Ole Römers Väg 3

**Friday 1st March – at AF Borgen, Sångsalen**

8.30-9.20 Keynote 3

Professor Risto Ilmoniemi, Title: “*Electronically feedback-controlled multi-locus TMS*”

9.20-10.00 Student presentations *“Biomedical devices and diagnostics”* (2 x 20 min) Session Chair: Lingwei Huang, Sumanta Samanta, (Support Laura Marzetti)

Yike Huang: *“A DNA origami-based chiral plasmonic sensing device”*

Vahid Farrahi: *“Mine the data, find the correlates of physical activity: a cross-sectional Study”*

*10.00-10.20 Coffee break and poster session*

10.20-11.10 Keynote 4

Professor Pablo Laguna, University of Zaragoza, Title: “*Physiologically driven biomedical Signal processing*”

11.10-12.30 Student presentations *“Biosignals”* (4 x 20 min) Session Chair: Barbara Genocchi, Joeri Kok, (Support Hannu Eskola)

Dao Nguyen: *“Principal component regression on motor evoked potential in single-pulse transcranial magnetic stimulation”*

Natalii Martyniuk: *“Encoding and decoding light stimuli under dim light condition in the mouse retina”*

Javier Milagro: *“Deriving tidal volume from electrocardiographic signal during treadmill test”*

Jaakko Syrjälä: *“Distributed long-range phase synchronization patterns predict working memory tasks”*

*12.30-13.30 Lunch*

13.45-14.15 Awards, final remarks and closing

14.30-15.30 General meeting of BioMEP steering committee

15.00- onwards Optional social activity, non-research related

The social activity will introduce you to the fun Swedish game of shuffleboard and a good-old game of billiards, followed by a nice dinner downtown in Lund.

16.30-18.30 . Shuffleboard and billiards

19.00 Dinner

\*All students are automatically signed up for the event. For senior scientists that would like to join, or for students that cannot join the social event, please inform [thomas.notermans@bme.lth.se](mailto:thomas.notermans@bme.lth.se)

**Instructions for Students before the Annual Meeting BioMEP 2019, Lund**

**Workshop:**

In this 4-hour informal workshop, participants will learn how to improve their presentation skills. The focus will be on short presentations (pitches) and the use of your voice and body. You will write these presentations during the workshop so there is no need to prepare.

**Presentation preparation:**

The presentation time for each student is **15 min**. Please stay on time. The 15 min should be distributed to include about 10 min introduction and summary of work you have done so far, and 5 min to describe your future plans for the coming year(s) of your PhD.

The 15 min will be followed by 5 min discussion time per student.

**Chairing a session:**

The students acting as chairs are expected to have read the abstracts in their session, and have prepared several questions in order to stimulate discussion, with particular focus on future research and/or opportunities. In addition, the student chair is expected to manage the time, e.g. a hand-signal when there is 1 minute left of the 15 min presentation, and conclude the discussion in order to stay within the schedule.

The senior investigator in the chair is expected to take a passive role in chairing the session, i.e. allow the junior researchers to chair the session, but are called upon to assist the student chairs if needed.

**Social event:**

The social activity on Friday afternoon will start after the scientific meeting ends. It will introduce you to the fun Swedish game of shuffleboard and a good-old game of billiards, followed by a nice dinner downtown in Lund.

\*All students are automatically signed up for the event. If you cannot join the social event, please inform: [thomas.notermans@bme.lth.se](mailto:thomas.notermans@bme.lth.se)