Lääketieteellisen fysiikan ja tekniikan yhdistys (LFTY)
Finnish Society for Medical Physics and Medical Engineering

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ONLINE TIEDOTE 3/2011
5.4.2011

1) Positions at University of Oulu

A PhD Student position and a Research Associate/Post-Doctoral Fellow position at University of Oulu, Institute of Biomedicine. Application deadlines 8th April and 15th April, respectively!!! **The calls for these positions are attached at the end of this document.**

2) Pikavalmistus seminaari huomenna 6.4 Otaniemessä!

Aalto-yliopisto ja Suomen pikavalmistusyhdistys järjestää pikavalmistusseminaarin, jossa on mukana myös voimakas lääketieteellisten sovellusten painotus. Yksi keynote-puhujistamme on Yhdysvaltain armeijan keskussairaalan (Walter Reed Army Medical Center) hammaslääkäri, joka suorittaa vaikeiden kallovammojen korjauksia pikavalmistettujen implanttien avulla. Seminaarissa on myös muita kiinnostavia lääketieteen alan esityksiä.

Seminaari järjestetään 6.4 Otanimessä. Seminaarin ohjelma ja ilmoittautuminen osoitteessa: http://www.isv.tkk.fi/firpa/

3) Medipolku-seminaari Kuopiossa 17.5.2011

Savonia-ammattikorkeakoulun, Itä-Suomen yliopiston ja Kuopion yliopistollisen sairaalan yhteinen Medipolku-projekti järjestää terveysteknologian seminaarin ja messut keväällä 2011.

Seminaari on avoin ja maksuton kaikille ennakkoon ilmoittautuneille. Tervetuloa!

Aika:	17.5.2011 klo 8.30 - 16.00
Paikka:	Technopolis Kuopion auditorio, Microkatu 1, 70201 Kuopio
Ilmoittautuminen:	10.5.2011 mennessä: **medipolku [at] savonia.fi**

Lisätietoja: http://www.medipolku.fi/

4) IFMBE MBEC'2011 Conference deadline EXTENDED!

Due to the requests of the participants and the continuous interest, it is our pleasure to announce that the deadline of paper submission for the 5th European Conference of IFMBE has been extended:

New deadline of paper submission: 9 April 2011

New deadline of early bird registration: 17 May 2011

The official website of the Conference is **www.embec2011.com**

Keynote speakers:

Herbert F. Voigt, Boston University, USA
Niilo Saranummi, VTT Technical Research Centre of Finland, Finland
Sergio Cerutti, Politecnico di Milano, Italy
Robert M. Nerem, Georgia Institute of Technology, USA

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The Conference will be a unique opportunity to get information on recent advances and new R and D activities in the field of biomedical engineering. The scientific sessions will provide you the possibility to meet experts in your special field of interest from all over the world.

5) EMBC 2011 Conference deadline EXTENDED!

EMBC'11 Announces Extension of Paper Submission Deadline!

EMBC'11 announced on Friday, 28 March the deadline extension for submitting papers to EMBC'11. The new submission deadline is Friday, 15 April 2011.

"The Organizing Committee felt this was the right thing to do given the circumstances in Japan and New Zealand," said Paolo Bonato, Conference Chair.

Students submitting to the Student Paper Competition sponsored by EMB and partnered by the National Science Foundation (NSF) should review the new deadline dates for having your Advisor submit the Nomination Form. STUDENTS, please remember if you are not an EMB Student Member by Friday, 15 April 2011, you are ineligible for the competition.

More information is available at the conference website: http://embc2011.embs.org/

Institute of Biomedicine
University of Oulu
Finland

UNIVERSITY of OULU
OULUN YLIOPISTO

Ph.D. Student position

March 7, 2011

Background: Osteoarthritis (OA) and osteoporosis (OP) are common musculoskeletal diseases. An inverse relationship between OA and OP has been observed in several studies, *i.e.*, it has been suggested that OP may protect against OA. Etiological factors for this finding are not yet understood.

It is also known that bone structure and geometry has a significant impact for the bone strength, and for the development of OP and the risk of fracture. Consequently, bone structure and geometry can even predict the development of OP and fracture in the future. On the other hand, structural properties of subchondral bone and joint geometry are known to be related to development of OA. However, their clinical significance remains still unknown. It would be a significant advantage if development of OA could be predicted from subchondral bone properties and joint geometry.

Aim: 1) To clarify whether an inverse relationship between hip OP and OA is observed in population-based cohort of ca. 650 patients, 2) To investigate the effect of bone structure and geometry on the hypothesized inverse relationship between these two diseases, and 3) To investigate the clinical significance of subchondral bone and joint geometry for prediction of development of OA.

Research environment: The research will be conducted at the Department of Medical Technology, Institute of Biomedicine, University of Oulu, Finland (http://www.medicine.oulu.fi/ltek/).

Requirements: Applications are invited for interested and motivated students from various fields. For example, the suitable background could be biomedical engineering, medical technology, medical physics, medicine, or other relevant field. Candidates with a recently completed M.Sc. degree, or who are currently finishing their M.Sc. degree, are invited to apply.

The experience in medical imaging (e.g. X-ray and ultrasound), biomedical imaging, digital image analysis and/or finite element modeling (FEM) is an advantage.

Salary: The salary is defined according to the YPJ salary system of Finnish universities.

Starting date: June 1st, 2011, or as soon as possible thereafter.

Application: Please send your application by email to Simo Saarakkala (simo.saarakkala@oulu.fi) by April 8th, 2011. The application documents should include: 1) A cover letter, 2) Grades of completed courses and degree certificates, 3) Curriculum Vitae, and 4) Full name and email address of one referee (preferably a supervisor of M.Sc. thesis).

Contact details: Please, direct any questions or correspondence to:

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Institute of Biomedicine
University of Oulu
Finland

UNIVERSITY of OULU
OULUN YLIOPISTO

Research Associate / Post-doctoral Fellow

March 7, 2011

Background: Osteoarthritis (OA) is a common musculoskeletal disease occurring in all populations. OA is associated with progressive degeneration of articular cartilage along with abnormal growth of underlying subchondral bone and cartilage-bone junction. OA may be regarded as a whole-organ joint disease. However, the complex interplay between inflammatory cells, synovial lining, articular cartilage and subchondral bone, causing the OA related tissue-level and cellular-level changes and subsequent clinical symptoms, is still poorly understood. Therefore, novel information is needed to better understand the etiology of OA, especially the earliest phases of the disease.

Aim: To experimentally clarify the early phases of OA in tissue and cellular level by applying novel multimodal biomedical imaging and tissue analysis techniques.

Research environment: The research will be conducted at the Institute of Biomedicine, University of Oulu, Finland (http://www.medicine.oulu.fi/biolaak/).

Length of the position: One year + possibility to an extension for second year.

Requirements: The suitable background for a successful candidate would be biophysics, biochemistry, biology, biotechnology, medical physics, biomedical engineering, or other relevant field. The experience in biomedical imaging, microscopical techniques and/or biomechanical tissue characterization is an advantage. Candidates with a recently completed Ph.D. degree (preferably < 3 years), or who are finishing their Ph.D. degree, are invited to apply.

Salary: The salary is defined according to the YPJ salary system of Finnish universities.

Starting date: July 1st, 2011, or as soon as possible thereafter.

Application: Please, send your application by email to principal investigator Simo Saarakkala (simo.saarakkala@oulu.fi) by April 15th, 2011. The application documents should include: 1) A brief introductory letter describing an earlier research experience, 2) Curriculum vitae and degree certificates, 3) List of scientific publications, and 4) Full names and e-mail addresses of two referees.

Contact details: Please, direct any questions or correspondence to:

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