Announcement

SEMINAR IN SPORTS SCIENCE
Biomechanical methods to improve performance and prevent injuries at the elite sport level
30th September 2014, 09:30–17:30
Aalborg University, Niels Jernes Vej 14 Lokale, 4-117

The RIG on Physical Activity and Human Performance (PAHP) and Eir cordially invite you to take part in a seminar on Tuesday, September 30, 2014. We have invited four international guests and two internal speaker who will present their research involvement in elite sports. We hope that this seminar catches the attention of students, coaches, athletes, clinicians and anyone who is interested in sports.

Program:

09:30 Welcome and introduction. by Prof. Uwe Kersting
09:35 Activity monitoring and musculoskeletal loading in soccer players. by Dr. Mark Lake, Liverpool John Moores University, Liverpool, GB.
   Mark Lake is a Reader in Biomechanics and has been working extensively on dynamic loading measurements in sports. He has long-lasting professional experience in footwear biomechanics and athlete monitoring and has been particularly interested in soccer being involved in projects supported by FIFA.
10:30 Coffee break.
11:00 Making the most of your data: Biomechanical insights into analysing curves by A/Prof. Mark Robinson, Liverpool John Moores University, Liverpool, GB.
   Mark Robinson is an Associate Professor in biomechanics and has a broad experience in sports and clinical biomechanics with also a keen interest in the statistical analysis of biomechanical data. He recently attracted a UEFA grant on player load monitoring and will give his perspective on what can be earned by going beyond standard analyses in biomechanics.
12:00 Lunch (at own expense)
13:00 Applied Biomechanics in Sports. by Dr. Lars Janshen, Humbolt-Universität zu Berlin, Institute for Sport Science, Dept. of Training and Movement Sciences
   Lars Janshen is a sports scientist in biomechanics and motor control focusing on the neuromuscular coordination of human movements with a strong background in technology. His applied research covers elite sports (gymnastics, rowing, cycling), occupational safety as well as health care (low back pain, gait analysis).
14:00 **Tendomuscular factors affecting running economy.** by Prof. Adamantios Arampatzis, Humboldt University, Berlin, Germany.

Professor A. Arampatzis is the Head of the Department of Training and Movement Science and the Spokesperson of the Berlin School of Movement Science, Humboldt-University Berlin. While Dr. Arampatzis has worked extensively with elite athletes from various disciplines his research is focused on the plasticity of the musculoskeletal system after long- and short-term mechanical loading and on the understanding of the interaction between neuro-muscular capacity and motor function during daily and sport activities.

15:00 **Coffee break**

15:30 **Using musculoskeletal modelling to improve performance.** by Prof. John Rasmussen, Department of Mechanical and Manufacturing Engineering, Aalborg University, Aalborg, DK.

John Rasmussen is one of the developers of the AnyBody Modeling System and works on various research projects where this software is used extensively. John will illustrate this work in respect to how such a modeling approach can be used to improve athletic performance.

16:30 **Skiing biomechanics. Improving selected aspects in skiing disciplines.** by Prof. Uwe Kersting, Aalborg University

Uwe Kersting has worked with numerous sports disciplines as well as international sports companies. This work covered both performance improvement and injury prevention. He was recently invited to the IOC prevention conference on injuries in sport and is currently working on improving both training programs and sports equipment. In this talk he will present his involvement in winter sport disciplines.

17:25 **Final discussion.** – end no later than 18:00

Please send a short registration e-mail to Ida Mejdal Christensen: [imc@hst.aau.dk](mailto:imc@hst.aau.dk), phone: 9940 7604.

If you have any other questions contact or Uwe: [uwek@hst.aau.dk](mailto:uwek@hst.aau.dk), phone 9940 8094

With best regards,

Uwe Kersting, Mark de Zee
Center for Sensory Motor Interaction (SMI), Aalborg University
Research Interest Group on Physical Activity and Human Performance (PAHP, Head Pascal Madeleine)