

OPPORTUNITY FOR A PH.D STUDENT INTERESTED IN MEDICAL PHYSICS AND ENGINEERING

CALL FOR APPLICATIONS

**STRUCTURE AND PROPERTIES OF CORTICAL BONE –
ANALYSIS USING ACOUSTIC MICROSCOPY AND NANOINDENTATION**

Duties

- Development and application of novel methodologies
- Scientific collaboration with other team members
- Writing scientific papers and a Ph.D thesis

Requirements for the applicant

- M.Sc. in Physics or Engineering (or at least at final stages of M.Sc. studies)
- Previous studies in Medical Physics/Engineering are an advantage

Research Environment

This Ph.D research will be conducted in the Department of Applied Physics, University of Eastern Finland. Biophysics of Bone and Cartilage (BBC) group (www.luotain.uef.fi) provides the support and active research environment for the applicant. The BBC group is globally one of the leading research groups in the fields of musculoskeletal physics and engineering. The project includes active collaboration with the department of Orthopaedics, Kuopio University Hospital, as well as active international collaboration.

The overall scope of this project is to determine how the metabolic and structural changes in cortical bone that occurs with age and, e.g., osteoporosis affect bone quality. Bone characteristics are assessed by several techniques, both established and newly developed.

In the specific project, the applicant will focus on the development and application of acoustic microscopy and nanoindentation technology on cortical bone, and also relates the novel findings with those obtained with other quantitative methods. Funding for the year 2012 is secured and will be later extended to include relevant time for Ph.D. studies. The work contract can be started as soon as possible.

When applying (an email to Jukka Jurvelin with documents attached), describe your background, aims and motivation for this position, attach your CV, certificate for your degree (with courses and grades), and contact information for 2-3 referees.

For more information:

Professor Jukka Jurvelin, Ph.D, Tel: 040-3539282, jukka.jurvelin@uef.fi