

Edinburgh, 18/12/15

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PhD Position in Biomechanics at Heriot-Watt University

With respect to its socio-economic burden osteoporosis is amongst the top five most detrimental diseases affecting modern societies. A constantly increasing life expectancy and millions of patients suffering from the disease necessitate an efficient management of those patients. During the last decades extensive research was conducted to understand the mechanical behaviour of bone. On the macro-level the elastic and the irreversible mechanical behaviour of bone tissue is well understood and allows to determine stiffness and strength of whole bones and bone-implant compounds in a patient specific manner. At the lower level of tissue organisation the mechanical behaviour of bone tissue is not yet understood. Understanding bone tissue at these length scales is crucial for the design of scaffold structures, bone replacements, or novel implant solutions.

The school of Engineering and Physical Sciences of Heriot-Watt University is currently establishing a laboratory for hierarchical materials testing from the microscale to the macroscale including a state-of-the-art preparation room for biological hard and soft tissues. Within this effort a fully funded PhD-position (£15000/year) for 42 months is available. The successful candidate will work in a multidisciplinary project involving microscopic machining, testing (including XRD), imaging, and simulation in the laboratory at Heriot-Watt University and at the European Synchrotron Radiation Facility in Grenoble/France. Stays up to eight weeks abroad at partner institutions are necessary.

We look for a candidate with a strong background in Physics, Material Science/Mechanics, or Tissue Biomechanics. The candidate should hold a MSc or an equivalent degree in a strongly related field. Good spoken and written English is mandatory. The candidate must be a UK or EU resident. Any residency other than that cannot be accepted.

Edinburgh, also called Athens of the North, is the vibrant capital of Scotland located at the shores of the Firth of Forth. It is known for its marvellous historical city centre, some of UK's top universities, its fascinating festival season, its radiant cultural amenities, and its open minded welcoming people. Even though one has to learn a dozen or so descriptions for the rapid change of sun and rain it is a top place to do a PhD. Please send your application including a letter of motivation, a complete CV, academic records and a copy of your MSc-Thesis (either in English, German, French, or Dutch) to Uwe Wolfram under the address given above.

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