



Institute of Biomechanics
Center for Biomedical Engineering
Head: Gerhard A. Holzapfel, Ph.D.
Professor of Biomechanics

Ph.D. Student wanted in
Computational Biomechanics for
Multidisciplinary EU-Project
Graz, Austria

David M. Pierce, Ph.D.
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Graz: August 3, 2009

Announcement

One position for a **Ph.D. Student in Computational Biomechanics** for 3 years, fully employed; expected from January 1, 2010 at the Institute of Biomechanics in Graz, Austria.

Acceptance conditions: M.S. in (Bio)mechanical Engineering, Applied Mathematics, Physics or related field and experience with desire to pursue Ph.D. degree.

Requested qualifications: Knowledge in the area of solid mechanics, and interest in biomechanics, finite element analysis and material modeling; desire to work in multidisciplinary, collaborative team environment, and in cooperation with other Universities; fluent English is required.

The Ph.D. Student will be integrated into an international collaborative team to perform finite element modeling of biological soft tissues and related analysis. The project aims to improve patient safety during cardiovascular disease treatment by enhancing new and promising, minimally-invasive catheterization procedures, and will provide surgeons with novel visual and haptic tools for robust and accurate catheter guidance. To enhance patient-specificity, the project will include extensive uniaxial and biaxial soft tissue experiments, correlating material behavior to patient factors (e.g., age, gender, pathology...). Image-based, patient-specific finite element modeling of the cardiovascular system will allow the calculation of local tissue stresses and deformations due to instrument manipulations during a procedure, facilitating clinically relevant haptic feedback and estimates of tissue damage.

Please send your application (cover letter, CV and contact information for 2 references) to the following address:

David M. Pierce, Ph.D.
Graz University of Technology
Institute of Biomechanics
Center of Biomedical Engineering
Kronesgasse 5/I
8010 Graz, Austria

End of the application date: **December 1, 2009**