



Institute of Biomechanics
Head: Gerhard A. Holzapfel, Ph.D.
Professor of Biomechanics

**PhD Student wanted in
Experimental Biomechanics
for an INDUSTRIAL PROJECT
Graz, Austria**

Gerhard A. Holzapfel, Ph.D.

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For BMMB Journal:

www.springeronline.com/journal/10237

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Graz: November 30, 2020

Open PhD Position

One position for a **PhD Student in Experimental Biomechanics including image analysis and modeling** for 3 years, fully employed; from **April 1, 2021** at the Institute of Biomechanics in Graz, Austria.

Acceptance conditions: M.S. in Biomechanical Engineering, Experimental Physics, Mechanical or Civil Engineering or related field and experience, with the desire to pursue a PhD degree.

Requested qualifications: Knowledge in the area of solid mechanics, and interest in biomechanics, and experimental laboratory work; desire to work in a multidisciplinary, collaborative team environment, and in cooperation with a company in the USA; fluent English is required.

The PhD Student will be integrated into a collaborative team to perform mechanical testing of biological soft (gastric) tissues and related analysis. The project aims to improve patient safety during digestive tract disease treatment by enhancing new and promising minimally-invasive procedures. To enhance patient-specificity, the project will include extensive mechanical testing at a wide range of loading rates and applied strains to identify a relationship between loading rate, peak stress development, and stress relaxation profiles. The microstructural organization during loading using multiphoton microscopy will be evaluated. Parameter estimations in constitutive models of viscoelasticity will be performed using multiple models for individual samples. The finalized material model will then be validated by simulating the test conditions in a finite element model.

Classification: B 1 according to the collective agreement for university employees; the monthly minimum charge for this use is currently € 2.929,00 gross (14 times a year).

Please send your application (cover letter, sample of written work such as the Master Thesis, CV, and contact information for 2 references) to the following address:

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Gerhard Sommer

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End of the application date: **February 14, 2021**