



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

**PhD Student wanted in
Experimental Biomechanics
for a RESEARCH PROJECT
Graz, Austria**

Gerhard A. Holzapfel, Ph.D.

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&

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For BMMB Journal:

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Graz: November 30, 2020

Open PhD Position

One position for a **PhD Student in Experimental Biomechanics** for 3-4 years; expected from **April 1, 2021** at the Institute of Biomechanics in Graz, Austria.

Acceptance conditions: M.S. in Biomedical Engineering, Experimental Physics, Mechanical or Civil Engineering or related fields 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 and collaborative team environment; fluent English is required.

The PhD Student will be integrated into a collaborative team to perform mechanical testing of biological soft (rabbit aortic and myocardial) tissues and related analysis/modeling. The project aims to better understand the influence of hyperhomocysteinemia (HHcy) on the cardiovascular system. HHcy is a novel independent risk factor for the development of atherosclerosis and is also linked to cardiac pathology. To enhance this understanding, the project will include extensive mechanical testing at a wide range of loading rates and applied strains, then microstructural investigations of aortic and myocardial tissues of rabbits fed with HHcy diet, hypercholesterolemia diet and normal diet. Material parameter estimations using appropriate constitutive models of (visco)elasticity will be performed for individual samples.

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**