



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

Gerhard A. Holzapfel, Ph.D.
Professor
Graz University of Technology, Austria
Stremayrgasse 16-II
8010 Graz, Austria

E-mail: holzapfel@TUGraz.at
Tel.: ++43 316 873 35500
Fax: ++43 316 873 35502
URL www.biomech.tugraz.at

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Open Position **PhD Student for Experimental Tests** **of Aortas and the Myocardium**

Graz: July 12, 2022

Open PhD Position

One position for a **PhD Student to perform experimental tests of aortas and the myocardium** for 3 years; expected start **as soon as possible** at the Institute of Biomechanics, Graz University of Technology in Austria.

Acceptance conditions: M.Sc. in Physics, (Bio)mechanical Engineering, Biomedical Engineering, Mechatronics or related field and experience with desire to pursue a PhD degree. Interest in experimental laboratory work; desire to work in a multidisciplinary, 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 impact 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 mechanical testing at a wide range of loading rates and applied strains and microstructural investigations of aortic and myocardial tissues of rabbits fed with HHcy diet, hypercholesterolemia diet and normal diet. Material parameter estimations using appropriate material models of (visco)elasticity will be performed for individual samples.

Classification: The monthly minimum charge for this use is currently € 2.293,95 gross (14 times a year) for 30 h per week with our willingness to overpay, depending on working hours.

Please send your application (cover letter, sample of written work such as the Master Thesis, CV, and contact information for 2 references) to Gerhard A. Holzapfel (holzapfel@tugraz.at).

Deadline: As soon as possible but not later than **August 15, 2022**.