

# Doctoral College “Mechatronics in Lienz“

## Call for Applications

The joint Doctoral College “Mechatronics in Lienz” of the University of Innsbruck (LFUI) and the Private University for Health Sciences, Medical Informatics and Technology (UMIT) is advertising five funded (contracted, 30h/week) positions for doctoral candidates with a duration of four years, starting in October 2017.

Doctoral colleges are centers of education for highly qualified junior scientists. Focused on research output at early career stages, they offer coordinated supervision in an interdisciplinary team. Regular exchange in lectures, meetings, or summer schools and a research stay abroad are obligatory. Successful completion of the Doctoral College program will be rewarded with a certificate in addition to the doctoral degree.

This Doctoral College is situated in Lienz in East Tyrol, where LFUI and UMIT established a joint university site and started the bachelor program mechatronics in 2016. The doctoral candidates are supervised by members from the Department for Biomedical Computer Science and Mechatronics at UMIT, the Departments of Mechatronics and Basic Sciences in Engineering Sciences at LFUI. The dissertation projects will be conducted in close cooperation with the local industry.

Possible dissertation areas include

- Additive manufacturing
- Advanced dynamics: tailored nonlinearity, model reduction and optimization
- Automation and control engineering
- Biomechanics: nerve stimulation, motion dynamics
- Characterization of materials, damage analysis, material selection
- Design and optimization of robots
- Design of mechatronic systems
- Electrical and biomedical engineering
- Electronic circuits and systems
- Energy harvesting and batteryless wireless systems; wireless sensor networks for Industry 4.0
- Image analysis and image processing
- Measurement and sensor technology
- Microelectronic and implantable systems
- Multibody dynamics and robotics
- Powder metallurgy

Participation in one of the accompanying doctoral study programs at UMIT or LFUI is obligatory. A good command of the English language is necessary. German language skills may be helpful but are not required.

For more information, please contact the speakers of the doctoral college, Hans-Peter Schröcker (LFUI, <http://geometrie.uibk.ac.at/schroecker/>, [hans-peter.schroecker@uibk.ac.at](mailto:hans-peter.schroecker@uibk.ac.at), +43 512-507-61202) or Daniel Baumgarten (UMIT, <http://www.umat.at/iebe>, [daniel.baumgarten@umat.at](mailto:daniel.baumgarten@umat.at), +43 50-8648-3827).