



We are Austria's largest Research and Technology Organisation and an international player in the research areas that we cover. This makes us a leading development partner for industry and a top employer in the scientific community. Our **Center for Health & Bioresources** in Vienna invites applications for a:

PhD Thesis „Arterial pulse wave analysis using models of ventricular dynamics“

IMAGINE

- In the field of clinical diagnostics and therapy support, you will research and develop innovative and smart medical technology solutions for the measurement of health data.
- As part of our interdisciplinary Cardiovascular Diagnostics team, you will analyse the dynamic processes of the human cardiovascular system and you will develop algorithms to determine clinically relevant parameters.

ENGAGE

- You will analyse bio-signals, in particular arterial pulse waves, and you will derive parameters for the quantification from them.
- You will evaluate the collected medical parameters statistically and interpret the results.
- You will develop a mathematical model to describe the relationship between ventricular dynamics and arterial pulse waveform, you will implement it and integrate the method into existing algorithms.
- You will describe the findings of your research in scientific publications.

ACHIEVE

- Your innovative results contribute to the success of our current research projects.
- Your research results will increase the knowledge of physiological relationships within the cardiovascular system and their correspondence in the recorded bio-signals.
- Your research will contribute to the development of a measurement system that will detect cardiovascular changes in microgravity (space), which subsequently will be used in clinical diagnostics and therapy support.

Your qualifications as an **Ingenious Partner (m/f)**:

- Completed studies (MSc. / Dipl. Ing.) with profound knowledge in mathematics (STEM-subjects)
- Programming know-how (MATLAB)
- In-depth knowledge in at least one of the fields: Bio-signal analysis, mathematical modelling, biostatistics
- Interested in the conception of scientific work (write a PhD thesis)
- Interest in the medical field and open for interdisciplinary cooperation
- Affinity for developing sustainable technical solutions and for accompanying their productive rollout in the scientific field.
- Good English in spoken and written, German is an advantage

What to expect:

EUR 2.162,40 gross per month for 30 hours/week. There will be additional company benefits. You will be part of our international AIT PhD community and participate in our AIT PhD framework program. As a research institution, we are familiar with the supervision and execution of PhD theses and we are looking forward to supporting you accordingly!

At AIT, the promotion of young female scientists is important to us - that's why we are especially looking forward to applications from female students!

TOMORROW TODAY – WITH YOU?

Please submit your application documents including CV, motivational letter and certificates via <https://jobs.ait.ac.at/Job/111075>

For further information please contact:
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