



The Automation and Control Institute (ACIN) at TU Wien is offering the following

## PhD-Position (m/f/d): „Robotic Actuation of a Plug Valve for Optimal Flow Control“

### What you'll be doing

In the Complex Dynamical Systems Group (Prof. Andreas Kugi) and in close cooperation with an **internationally active, industrial research partner** you will develop new methods for modeling, analyzing, monitoring, robotic actuation, and control of the fluid flow in a plug valve for liquid metal.

### Research topics

- Enhancement of a laboratory model by spatial actuation of the plug valve with a robotic manipulator
- Identification of mathematical models for the fluid flow and flow patterns
- Estimation and soft-sensing of non-measurable process variables
- Optimization and learning control of the flow by manipulating the plug
- Realization and test of control solutions in simulations and on the laboratory model

### Your profile

- Master's degree in mathematics, automatic control, computer science, mechatronics, robotics, electrical engineering, mechanical engineering, mechanics, fluid dynamics, physics
- Excellent technical understanding and analytical capabilities
- High commitment and motivation, willingness to contribute to academic teaching
- Team spirit, strong communication skills, goal orientation, structured, and responsible way of working
- Very good command of written and spoken English, basic skills in German favorable

### We offer

- Future-oriented research and innovative solutions for the latest problems
- Scientific freedom and time to author a PhD dissertation
- Solid training and continuing education as well as participation in international conferences
- Promotion, support, dialog, and cooperation in a motivated and interdisciplinary team
- Cooperation with a renowned, internationally active, industrial research partner
- Secured funding and well equipped infrastructure
- Employment contract for 3 years (40 hours a week) with option for extension
- Gross salary of € 42.820,40 p.a.

We are looking forward to receiving your application including the usual documents via e-mail sent to [ochsenreiter@acin.tuwien.ac.at](mailto:ochsenreiter@acin.tuwien.ac.at). In case of questions, please contact Prof. Andreas Kugi (e-mail: [kugi@acin.tuwien.ac.at](mailto:kugi@acin.tuwien.ac.at)).

### About us

The Automation and Control Institute (ACIN) belongs to the Faculty of Electrical Engineering and Information Technology of TU Wien. At ACIN, more than 80 researchers conduct basic research, solve challenging practical problems, cooperate with industrial research partners, develop innovations, and offer students excellent academic teaching in the fields systems theory, automation, and control engineering. More info at <https://www.acin.tuwien.ac.at/komplexe-dynamische-systeme-cds/>.