



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

## PhD-Position (m/f/d): „Model-based thermal management, control, and optimization for die-casting machines“

### What you'll be doing

In the Complex Dynamical Systems Group (Prof. Andreas Kugi) and in close cooperation with an **internationally active research consortium**, you will develop new methods for the thermal management, control, and optimization of die-casting machines.

### Research topics

- Mathematical modeling: Combination of physics-based models with data-based approaches
- Development and application of calibration and model-order reduction strategies
- Analysis and extension of the sensor system, including temperature sensors, thermal imaging, etc.
- Design of sensor fusion systems and soft sensors to assess non-measurable system quantities
- Closed-loop process control with a focus on process stability, product quality, and optimality (energy, production time)
- Test of the strategies in test stands at industrial cooperation partners

### Your profile

- Master's degree in mathematics, automatic control, computer science, mechatronics, electrical engineering, mechanical engineering, physics
- Excellent technical understanding and analytical capabilities
- High commitment and motivation, willing to contribute to academic teaching
- Team spirit, strong communication skills, goal orientation, structured, and responsible way of working
- Excellent 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 thesis
- 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 research consortium
- Secured funding and well-equipped infrastructure
- Employment contract for 3 years (40 hours a week) with an option for extension
- Gross salary of € 45.882,20 p.a.

We are looking forward to receiving your application, including the usual documents via e-mail sent to [applications.cds@acin.tuwien.ac.at](mailto:applications.cds@acin.tuwien.ac.at). In case of questions, please contact Prof. Wolfgang Kemmetmüller (e-mail: [kemmetmueller@acin.tuwien.ac.at](mailto:kemmetmueller@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/>.