

PhD position in Knowledge Representation and Reasoning / Artificial Intelligence

The Knowledge Representation and Reasoning (KRR) group at the Institute of Software Technology, Graz University of Technology, offers

a funded PhD student position

within knowledge representation and reasoning, and with a particular focus in the field of Computational Argumentation in Artificial Intelligence.

Central aims of Computational Argumentation are to investigate representations of arguments, study their relationships, and perform automated argumentative reasoning, with application domains, e.g., in medical or legal reasoning, and eXplainable Artificial Intelligence (XAI).

With the PhD projects, we will advance the state of the art of foundational research on the complex reasoning process underlying argumentation. You will work on tasks ranging from theoretical understanding, such as complexity analysis, to algorithmic solutions for challenging (NP-hard) reasoning tasks.

Desired Qualifications:

We are looking for motivated and talented applicants with very good university degrees (MSc or equivalent) in Computer Science or Mathematics (or comparable fields), and with solid background in one or more of:

- logic, knowledge representation and reasoning, non-monotonic reasoning,
- logic programming, answer set programming, Boolean satisfiability,
- formal methods in computer science, particularly computational complexity theory,
- graph theory, discrete mathematics, or
- strong implementation skills motivated by challenging combinatorial problems and interest in theory.

The positions are funded by the Austrian Science Fund (FWF), full-time, and fixed-term for three years. The contracts will be under the collective agreement for university employees at TU Graz. Candidates should be independent in organising their work, keen on working with teams of experts of project partners, and fluent in English, oral and written. Starting time can be as soon as possible, but some degree of flexibility is possible.

An inclusive environment and balancing family and career are important aspects to the group and university. We encourage women to apply.

Application:

Applications with

- a full curriculum vitae,
- a statement of your research interest,
- your Master's thesis and a list of subjects studied (together with grades), and
- other relevant documents (e.g., recommendation letters)

should be sent electronically to Assistant Professor Johannes P. Wallner, if possible as a single pdf file. In case of questions, don't hesitate to contact Wallner for more information.

Contact and links:

- Johannes P. Wallner: <https://www.tugraz.at/institute/ist/research/group-wallner/people/johannes-peter-wallner/>
- Group webpage: <https://www.tugraz.at/institute/ist/research/group-wallner/>
- This call for applications: <https://www.tugraz.at/institute/ist/research/group-wallner/jobs/>