# Institute for Symbolic Artificial Intelligence / Formal Models & Verification







- DI Maximilian Heisinger
- Univ.Prof. Dr. Martina Seidl



### Possible Directions (Selection)

- Encodings: Translate an application problem into logic and solve it Games, Planning, Scheduling, Synthesis, Verification, ...
- Solving: Implement new solving technology and make it faster SAT, QBF, SMT
- Certification & benchmarking: Increase trust in solving result
  Generation of proofs and proof checking, solver testing
- Logic Education: Make logic easier accessible
  Training tools, educational games









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## (Selection of) Possible Concrete Topics

- Analysis of Differences Between Time Tracking APIs
- Slurm Cluster Load Visualizer
- Exact Cover Problem SAT (CNF) Encoding
- Improved (AI-Based) SAT and QBF Splitting Heuristics
- Transforming Logic Tools into the Browser: Next Steps for Limboole
- Survey and Development on How-To Improve AI Deployment as Binaries. From the Notebook to the Solver!



#### Questions?

#### Email:

martina.seidl@jku.at maximilian.heisinger@jku.at

