

MAXIMILIAN LEVI HEISINGER

Computer Scientist

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EXPERIENCE

University Assistant

Johannes Kepler University Linz

📅 Nov. 2021 – Ongoing 📍 Linz, Austria

- Built the distributed cube-and-conquer QBF solver *Paraqooba*.
- Planned, designed, and built a HPC cluster for our research group.
- Organized industry research-partnerships about SMT applications.

Student Researcher

Johannes Kepler University Linz

📅 May 2019 – Nov. 2021 📍 Linz, Austria

- Built the distributed cube-and-conquer SAT solver *Paracooba*.
- Worked on GraalVM-based Symbolic Execution tool *SymJEX*.
- Developed *Limboole on the Go* (online SAT-solver) and *Logbook* (interactive web-based e-book for teaching logic).

Research Assistant

Fabasoft

📅 May 2017 – July 17 📍 Linz, Austria

- Built a voice-controlled interface for the Mindbreeze search.

PUBLICATIONS

- M. Heisinger, M. Seidl, and A. Biere, “QuAPI: Adding assumptions to non-assuming SAT & QBF solvers,” vol. 3201, 2022.
- M. Heisinger, M. Fleury, and A. Biere, “Distributed cube and conquer with paracooba,” in *Theory and Applications of Satisfiability Testing*, Springer, 2020, pp. 114–122. DOI: 10.1007/978-3-030-51825-7_9.
- S. Kloibhofer, T. Pointhuber, M. Heisinger, H. Mössenböck, L. Stadler, and D. Leopoldseider, “SymJEX: Symbolic execution on the GraalVM,” in *Managed Programming Languages and Runtimes*, ACM, 2020. DOI: 10.1145/3426182.3426187.

REFEREES

Prof. Martina Seidl

✉ Institute for Symbolic AI

✉ martina.seidl@jku.at

JKU, Altenbergerstr. 69, 4040 Linz, Austria

Prof. Armin Biere

✉ Chair of Computer Architecture

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ALU, Georges Köhler Allee, Building 51, 79110 Freiburg, Germany

MOST PROUD OF



Adolf-Adam Award

Award for outstanding Master’s Thesis



Best Presentation Award

For Paracooba at SAT’20



Developed the Rover *VERNER*

Remote-controlled rover platform built by 5 students, software and org by me



Created *Limboole on the Go!*

Prof. Seidl: “Revolutionized Teaching”

STRENGTHS

Team-Player Dependable Organizer

Problem-Solver Communicator

C++ C Rust Python Java CL

SAT SMT HPC Benchmarking

Web Technologies Networking Linux

LANGUAGES

German ● ● ● ● ●

English ● ● ● ● ●

Spanish ● ● ● ● ●

EDUCATION

Ph.D. in Computer Science

Johannes Kepler University Linz

📅 Nov. 2021 – Ongoing

Thesis: Encoding, Solving, and Benchmarking for SAT and Extensions

M.Sc. in Computer Science

Johannes Kepler University Linz

📅 August 2020 – Nov. 2021

Thesis: Distributed SAT & QBF Solving: The Paracooba Framework

B.Sc. in Computer Science

Johannes Kepler University Linz

📅 Oct. 2017 – July 2020

Thesis: Static Analysis of Physically Constrained Software Systems Using SMT