Levente Bajczi

Computer scientist · PhD Student

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🎓 Education and Degrees

2022–	**Computer Science PhD**, *Budapest University of Technology and Economics*. Advised by Vince Molnár
2021–2022	**Computer Engineering MSc**, *Budapest University of Technology and Economics*. Thesis: Handling Axiomatic Memory Models in Abstraction-Based Model Checking of Concurrent and Distributed Systems 📄
2017–2021	**Computer Engineering BSc**, *Budapest University of Technology and Economics*. Thesis: Stateless software model checking parameterized with memory consistency models 📄

🌐 Employment

2021–	**Center for University-Industry Cooperation, BME**, *Budapest, HU*, Research Assistant. Involved in systems engineering related research and development.
2020–2021	**thyssenkrupp Components Technology Hungary**, *Budapest, HU*, IoT Consultant. Providing feedback to IoT system developers (related to communication, networking and system design).
2019–2022	**Budapest University of Technology and Economics**, *Budapest, HU*, Teaching Assistant. Delivering practical lectures, correcting and assembling exams, managing homework IT infrastructure.

🪪 Internships

2020	**thyssenkrupp Components Technology Hungary**, *Budapest, HU*, Software Engineering Intern. Developing experimental multiprocessing support for a custom AUTOSAR Operating System.

🤝 Volunteering

2015–2021	**Skool**, *Budapest, HU*, Mentor & Programming Tutor. Helping underrepresented students start their journey with programming.

⚙ Certifications

2021	**OMG-OCSMP Model User**. Demonstrating the ability to interpret and understand basic MBSE concepts along with SysML models.

💡 Skills and Interests

Research	Formal methods, model checking, systems engineering, SAT/SMT, compilers
Development	Java, Kotlin, Python, C, C++, Shell, Git, CI/CD
Tools	Theta (maintainer), Benchexec (contributor), JavaSMT (contributor)
Languages	Hungarian (native), English (advanced), German (conversational)

🏆 Awards and Scholarships

2024	**Pro Scientia Gold Medal**.
2023–2025	**"DKÖP" Research Scholarship**.
2019–2025	**"ÚNKP" Research Scholarship**.
2019–2022	**National Academic Scholarship**.
2018–2021	**Scholarship of the Faculty of BME-VIK**.
2019, 2021	**First place at the National Scientific Students' Associations Conference**.
2020	**First place at the Scientific Students' Associations Conference (Software)**.
2018, 2021	**First place at the Scientific Students' Associations Conference (Embedded Systems)**.
2018, 2021	**Award of the Rector of the University**.
2019	**Travel Grant by ACM SIGBED to attend EMSOFT '19**.
2019	**EFOP Research Scholarship**.
2017	**Grant from the Human Capacities Grant Management Office**.
2016–2018	**Scholarship from the Richter Gedeon Talentum Foundation**.

📄 Selected Publications

SoSyM	**NetworCat: applying analysis techniques of shared memory software on message-passing distributed systems**, 📄 *L. Bajczi, V. Molnár.*
TACAS'25	**On Stability in a Happens-Before Propagator for Concurrent Programs (Reproducibility Study)**, 📄 *L. Bajczi, Cs. Telbisz, D. Szekeres, A. Vörös.*
SPIN'24	**Solving Constrained Horn Clauses as C Programs with CHC2C**, 📄 *L. Bajczi, V. Molnár.*
FormaliSE'22	**C for Yourself: Comparison of Front-End Techniques for Formal Verification**, 📄 *L. Bajczi, Zs. Ádám, V. Molnár.*
ACM TECS	**Will My Program Break on This Faulty Processor?**, 📄 *L. Bajczi, A. Vörös, V. Molnár.*
Full lists	🔗leventebajczi.github.io/publications.html 🎓WDQ2jg4AAAAJ 🆔0000-0002-6551-5860

🏛 Academic Activities and Services

Reviewer (journal)	SCP
Local chair	OTDK'25
PC member	TACAS'24 (SV-COMP), TACAS'23 (SV-COMP), FormaliSE'23, CSAE'23
Subreviewer	ISSRE-W'22, VMCAI'23, SBMF'23, FASE'25
AE	TACAS'24 (SV-COMP), TACAS'23 (SV-COMP), TACAS'22 (SV-COMP), CAV'22, CAV'23, FormaliSE'24, Formalise'25, ESOP/FASE/FoSSaCS'24, SPIN'25

📖 Teaching

Courses	Basics of Programming 1-2 · Formal Methods · Operating Systems · Systems Modeling · Systems Engineering · Databases · Digital Technology
Students	Advising 3 MSc students on abstraction-based software verification