

# Gergely Varró

## Curriculum vitae

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### Work experience

- 2023 – present **Technical director**, *Software AG, University Relations*, Darmstadt, Germany.  
As a team leader of 4–5 students, I have directed a complex, cross-technology production system migration for the main administration platform of the University Relations team responsible for (i) the synchronization of access control configurations between 3 systems, (ii) the automated tenant and user management in a SaaS environment, and (iii) the license key and certificate generation involving a legacy application. The platform was integrated with 6 other systems, and the technology change affected the underlying database engine, the messaging infrastructure, and the business process engine. I have been a chief decision maker responsible for all the technical activities of the University Relations team including software development, IT infrastructure planning and operation, conceptual design and quality assurance of the education packages, and data protection related tasks. Additionally, I have developed a live world map showing the location of our university customers that was fed with business data originating from two sources.
- 2016 – 2023 **Manager Java development**, *Software AG, University Relations*, Darmstadt, Germany.  
As a team leader of 4–5 students, I supervised the development and quality management of on-premise and cloud-based education packages that were provided by Software AG for teaching and research purposes. I was the contact person in charge for providing direct support in technical issues to students and faculty members worldwide participating in the University Relations Program. I was responsible for operating IT systems in production that administered students and faculty members, and managed their access to all artifacts of several education packages. Additionally, I led 3 migration projects on production IT systems.
- 2012 – 2016 **Postdoctoral researcher**, *Technical University Darmstadt, Real-Time Systems Lab*, Darmstadt, Germany.  
As a group leader of 3–5 PhD students, I designed the refactored architecture of the open source [eMoflon](#) tool, which can carry out unidirectional model transformation and bidirectional model synchronization on EMF models. The model transformation modules of the eMoflon tool were bootstrapped, which means that the complete transformation process had been specified by EMF models and implemented according to the model-driven software development principles. I gave lectures and exercises for (model-driven) software engineering courses in English and in German.
- 2010 – 2012 **Humboldt postdoc research fellow**, *Technical University Darmstadt, Real-Time Systems Lab*, Darmstadt, Germany.  
As a personal project, I carried out research on the integration possibilities of orthogonal graph pattern matching algorithms and techniques, and designed and implemented Democles, which is a graph pattern based query framework that supports incremental evaluation over heterogeneous data sources.
- 2006 – 2010 **part-time assistant lecturer**, *Budapest University of Technology and Economics, Department of Computer Science and Information Theory*, Budapest, Hungary.  
I was a teaching assistant for several courses in the fields of automata theory, lexical analysis, parsing, databases, and algorithms. Additionally, I was responsible for scheduling and preparing exams and mid-term exams for the Formal Languages course. I gave lectures for foreign students in English.
- 2007 – 2008 **part-time research assistant**, *Budapest University of Technology and Economics, Department of Measurement and Information Systems*, Budapest, Hungary.  
As a senior project member (in a group of 4) I was involved in the development of the Java-based, open source [VIATRA2](#) model transformation tool. I was responsible for the design, implementation, and integration of the (performance critical) graph pattern matching module (and its algorithms).

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## Education and training

- 2003 – 2008 **PhD in Computer Engineering**, *Budapest University of Technology and Economics, Department of Computer Science and Information Theory, Budapest, Hungary, Summa cum laude.*  
Title: *Advanced Techniques for the Implementation of Model Transformation Systems*  
Research areas: model-driven software development, model transformation, graph transformation (GT in relational databases, adaptive and incremental GT engines, GT benchmarks, graph pattern matching algorithms)
- 1997 – 2003 **MSc in Technical Informatics**, *Budapest University of Technology and Economics, Faculty of Electric Engineering and Technical Informatics, Specialization in IT infrastructure design, Budapest, Hungary, Distinguished degree.*  
Master's thesis: *Integrated Formal Verification of Dynamic UML Models*

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## Personal skills and competences

### Language skills

- Hungarian **Mother tongue**  
English, German **Advanced (C1)**

### Social skills

- Team work and intercultural skills Experience gained while (i) being involved in the open source eMoflon and VIATRA projects, and (ii) leading multicultural teams for 15 years
- Teaching skills 11-year experience as a teaching assistant (Topics: (model-driven) software engineering, algorithms, automata theory, lexers, parsers, databases)

### Organizational skills

- Program Committee co-chair at the 4th International Symposium on Applications of Graph Transformation with Industrial Relevance (AGTIVE 2011)
- Course organizer at the Department of Computer Science and Information Theory for the Formal languages course for 14 semesters being responsible for scheduling and preparing exams

### Computer skills

- Languages Java (StringTemplate, Velocity, FreeMarker), EMF,  $\LaTeX$ , UML, QVT, JSON, HTML, XML
- Frameworks Spring (Core, Data JPA, Web, Security, Web Flow), Servlets (Tomcat), JDBC, ActiveMQ, Hibernate, JUnit
- Databases MySQL, MS SQL, Oracle, PostgreSQL
- Other Eclipse (including plugin development, OSGi and Xtext), Keycloak, Gradle, Linux, SVN, Git, Apache Ivy, ANTLR, Emacs, Apama, Cumulocity, webMethods

### Other skills

- Good analytical skills (including refactoring, system integration and migration tasks)
- Precise, self-motivated, autonomous, fast learner

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## Additional information

- Personal interests Soccer (playing as a defender), skiing, ice dancing
- Publications 1 proceedings, 5 peer-reviewed journal papers, 30 peer-reviewed conference papers, 4 technical reports (<https://www.cs.bme.hu/~gervarro/publication/>)

Frankfurt am Main, March 31, 2025.