Viet-Man Le

Project Assistant
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Research Interests

Knowledge-Based Diagnosis, Conflict Detection, and Explanation; Machine Learning for Constraint Solving; Knowledge-Based Configuration and Software Product Lines; Constraint Acquisition; Large Language Models for Software Engineering.

Education

Graz University of Technology — Graz, Austria
PhD in Computer Science (Dr.techn.) — *2020 – 2026*

- Thesis: *Intelligent Techniques for Efficient Diagnostic Reasoning in Constraint-Based Systems*. Developed solver-agnostic algorithms for conflict detection, diagnosis, and quality assurance that scale to industrial constraint-based systems, such as configuration systems and recommender systems.
- Defended on 14 September 2026 – Grade: *very good*
- Supervisor: Prof. Alexander Felfernig

Institute for Informatics in French-speaking areas — Hanoi, Vietnam
Master of Computer Science – Artificial Intelligence & Multimedia — *2009 – 2011*

- Double diplomas with University of La Rochelle (France) and Hanoi University of Science and Technology (Vietnam)
- Master's Thesis: *Système de navigation dans des bases de données d'images* (image browser based on Self-Organizing Maps). Supervisor: Prof. Michel Verleysen, Catholic University of Louvain, Belgium

University of Sciences, Hue University — Hue, Vietnam
Bachelor of Computer Science — *2000 – 2004*

Selected Publications

According to Google Scholar (September 2026): **973 citations**, h-index **14**, i10-index **18**, across more than 50 peer-reviewed papers. Full list at manleviet.github.io/publications.html.

Christian Bähnisch, Alexander Felfernig, Damian Garber, Albert Haag, Denis Helic, Lothar Hotz, **Viet-Man Le**, Sebastian Lubos. *Machine Learning for Constraint-based Configuration: A Survey*. *Journal of Artificial Intelligence Research*, vol. 86, article 30, 2026. **SCIMAGO Q1**

Alexander Felfernig, **Viet-Man Le**, Sebastian Lubos, Thi Ngoc Trang Tran. *Constraint Acquisition of Configuration Knowledge Bases with Maximum Satisfiable Subsets*. *Software and Systems Modeling* (under revision), 2026. **SCIMAGO Q1**

Viet-Man Le, Lukas A. Feldgrill, Alexander Felfernig. *Robust Lazy Conflict Detection via Multi-Conflict Extraction and Genetic Diversity Control*. *Proceedings of the AAAI Conference on Artificial Intelligence*, vol. 40, no. 23, pp. 19208–19215, 2026. **CORE A***

Viet-Man Le, Thi Ngoc Trang Tran, Sebastian Lubos, Alexander Felfernig, Damian Garber. *Early-Stage Product Line Validation Using LLMs: A Study on Semi-Formal Blueprint Analysis*. *Proceedings of the 41st ACM/SIGAPP Symposium on Applied Computing (SAC 2026)*, pp. 1620–1627, 2026. **CORE B**

Alexander Felfernig, **Viet-Man Le**, Damian Garber, Sebastian Lubos, Thi Ngoc Trang Tran. *Automated Testing and Debugging of Configuration Knowledge Bases With Direct Diagnosis*. *Journal of Intelligent Information Systems*, 2026. **SCIMAGO Q2**

Mathias Uta, **Viet-Man Le**, Alexander Felfernig, Denis Helic. *Learning Constraint Orderings for Direct Diagnosis*. *Journal of Intelligent Information Systems*, vol. 63, no. 5, pp. 1753–1777, 2025. **SCIMAGO Q2**

Viet-Man Le, Alexander Felfernig, Thi Ngoc Trang Tran, Mathias Uta. *InformedQX: Informed Conflict Detection for Over-Constrained Problems*. *Proceedings of the 38th AAAI Conference on Artificial Intelligence*, vol. 38, no. 9, pp. 10616–10623, 2024. **CORE A***

Viet-Man Le, Cristian Vidal Silva, Alexander Felfernig, David Benavides, José Galindo, Thi Ngoc Trang Tran. *FastDiagP: An Algorithm for Parallelized Direct Diagnosis*. *Proceedings of the 37th AAAI Conference on Artificial Intelligence*, vol. 37, no. 5, pp. 6442–6449, 2023. **CORE A***

Viet-Man Le, Alexander Felfernig, Mathias Uta, David Benavides, José Galindo, Thi Ngoc Trang Tran. *DirectDebug: Automated Testing and Debugging of Feature Models*. *Proceedings of the ACM/IEEE 43rd International Conference on Software Engineering: New Ideas and Emerging Results*, pp. 81–85, 2021. **CORE A***

Employment

Graz University of Technology Graz, Austria
University Assistant/Project Assistant *2020 – present*

- Designed and implemented solver-agnostic algorithms for conflict detection, direct diagnosis, redundancy detection, and automated debugging that scale to industrial constraint-based systems, such as configuration systems and recommender systems
- Developed and maintained open-source research software (HiConfiT, DirectDebug, FM2ExConf) supporting feature model analysis and diagnosis, with contributions integrated into the flamapy ecosystem

University of Economics, Hue University Hue, Vietnam
Vice-Dean, Faculty of Economic Information Systems *2014 – 2019*

- Led the design and launch of the Undergraduate Degree Program in Management Information Systems
- Established faculty-level policies for academic advising, career planning, and student professionalisation
- Coordinated curriculum development, teaching assignments, and quality assurance across the faculty's undergraduate programmes

University of Economics, Hue University Hue, Vietnam
Lecturer, Faculty of Economic Information Systems *2004 – 2020*

- Taught Programming (C#, Python, Java), Data Structures and Algorithms, and Windows Applications Programming to undergraduate students
- Researched recommender systems, with a focus on multi-agent models for collaborative filtering
- Advised 2–6 undergraduate students per year (2012–2019) on bachelor theses and student research projects in information systems

Funded Research Projects

GenRE – Generative AI for Requirements Engineering 2024 – 2027
FFG Bridge project. Team member. Industry partner: Morgendigital.

- Develops LLM-based techniques for requirements elicitation, quality assurance, and validation in software engineering

Kickscale: KI-Engine – Sales-Specialized LLM for the Kickscale SaaS Platform 2023 – 2025
FFG Basisprogramm project. Scientific consulting role via TU Graz. Industry lead: Kickscale GmbH.

- Developed LLM-based methods for extracting Ideal Customer Profiles from CRM deal data, and released frameworks for evaluating LLM and RAG outputs

OpenSpace – AI Techniques for Testing Highly-Variant Software 2021 – 2024
FFG Bridge project. Team member. Industry partner: Uniquare GmbH.

- Developed machine-learning approaches for testing and debugging variability-intensive software, including automated analysis of variability models and identification of faulty components

ParXCel – Scalable Constraint Solving via ML and Parallelization 2020 – 2023
FFG Bridge project. Team member. Industry partner: Combeenation GmbH.

- Integrated machine learning into constraint-based reasoning and parallelized conflict detection and direct diagnosis to boost performance (FastDiagP, InformedQX)

Grants & Awards

Projektfonds Lehre 2026 (*Project Fund for Teaching*) 2026
TU Graz Vice-Rectorate for Teaching – MIRROR project (team member, PI: Prof. Alexander Felfernig)

Best Teaching Award – Nominations 2023, 2024, 2025
Course Introduction to Structured Programming*, Graz University of Technology*

Young Experts: Minute Madness Session 2024
Austrian Computer Science Day 2024 – session for excellent doctoral students in CS at Austrian universities

Hue University Research Grant 2015 – 2016
Project: Multi-agent model for tourist attraction recommender systems *(team member)*

Service

Conference and Workshop Organisation

Chair, 27th International Workshop on Configuration (ConfWS 2025) 2025
Co-located with the 28th European Conference on Artificial Intelligence (ECAI 2025), Bologna, Italy

Proceedings Chair, 26th ACM International Systems and Software Product Line Conference 2022
Graz, Austria

Program Committee Member

2026: ConfWS 2026, AAAI 2027
2025: RecSys 2025, SPLC 2025, ECAI 2025, AAAI 2026
2024: ConfWS 2024, IntRS 2024, SPLC 2024

Conference and Journal Reviewer

2026: 1 × SoSyM, 1 × JIIS, 2 × ConfWS, 3 × AAAI 2027
2025: 2 × RecSys 2025, 2 × SPLC 2025, 4 × ECAI 2025, 5 × AAAI 2026, 7 × JIIS
2024: 2 × ConfWS 2024, 2 × IntRS 2024, 3 × SPLC 2024, 2 × ESWA

Teaching

Graz University of Technology (University Assistant, 2020 – 2026; Project Assistant since 2026)

Introduction to Structured Programming (ISP) 2020 – 2026
Course organization, assignment design. Nominated for Best Teaching Award in 2023, 2024, 2025.

Object-Oriented Analysis and Design (OAD) 2022 – 2026
Assignment design on design principles and patterns; lecturer on Design Patterns in 2024 and 2025.

University of Economics, Hue University (Lecturer, 2004 – 2019)
Courses taught: Introduction to Programming (C#, Python), Windows Applications Programming, Data Structures and Algorithms, Object-Oriented Programming.

Mentoring and Co-Supervision

Fabian True (Bachelor) 2025
FM2ExConf: A Web-Service to Convert Feature Models into an Executable Representation in Microsoft Excel

Nhat Minh Hoang (Bachelor) 2025
From Conflicts to Efficiency: Learning Constraint Orderings for QuickXPlain

Lukas A. Feldgrill (Master) 2025
Robust Lazy Conflict Detection via Multi-Conflict Extraction and Genetic Diversity Control (AAAI 2026)

Yunus Emre Akca (Bachelor) 2023
PWipeOutR: Parallelized Redundancy Detection for Feature Models

Tamim Burgstaller (Bachelor) 2022
FMTesting: A FeatureIDE Plug-in for Automated Feature Model Analysis and Diagnosis (PAIS/ECAI 2023)

Software & Tools

HiConfiT – Suite of open-source Java libraries (*hiconfit-core*) and CLI apps (*KBStatistics*, *FMGen*) for Knowledge-Based Configuration Systems.
FMTesting – FeatureIDE plug-in for automated feature model testing and debugging (PAIS 2023).
FM2ExConf – Feature Model to Excel Configurator converter, built on hiconfit-core.
DirectDebug – Java software package for automated testing and debugging of variability models (Software Impacts, 2021).
flamapy – Contributed FastDiagP, DirectDebug, and WipeOutR plugins to the Python ecosystem for feature model analysis.

Technical Skills

Constraint Solvers & Tools: Choco, SAT, MiniZinc
Programming Languages: Java, Python, C/C++, SQL
Frameworks & DevOps: Spring Boot, FeatureIDE (Eclipse plug-in), Git, Docker, GitHub Actions
Languages: English (fluent), Vietnamese (native)

References

Univ.-Prof. Dipl.-Ing. Dr.techn. Alexander Felfernig PhD Supervisor
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- Email: alexander.felfernig@tugraz.at

Dr. Habil. Binh Nguyen Former Undergrad. Lecturer
Research Scholar, International Institute for Applied Systems Analysis (IIASA), Austria
- Formerly Lecturer at the University of Sciences, Hue University, Vietnam
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