Viet-Man Le

Project Assistant and PhD Candidate
Institute of Software Engineering and Artificial Intelligence
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Research Interests

Knowledge-based Diagnosis, Configuration Systems, Software Product Lines, Explanations in AI, Large Language Models for Software Product Line Engineering, Constraint Acquisition.

Education

Graz University of Technology — Graz, Austria
PhD in Computer Science (in progress) — *2020 – expected 2026*

- Thesis: *Intelligent Techniques for Efficient Diagnostic Reasoning in Constraint-Based Systems.* Develops solver-agnostic algorithms for conflict detection, diagnosis, and quality assurance that scale to industrial constraint-based systems, such as configuration systems and recommender systems.
- 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) – Score: 15.4/20 (Très bien). Supervisor: Prof. Michel Verleysen, Catholic University of Louvain, Louvain-la-Neuve, Belgium
- Master 1 TPE: *Visualisation de graphes pour la recherche interactive d'images* (graph-based visualization for interactive image retrieval) – Score: 15/20 (ranked 1st in class). Supervisor: Prof. Alain Boucher

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

- Bachelor's Thesis: *Check Spelling Based on Analyzing the Grammar of Vietnamese Phrases* – Score: 10/10 (one of three students with maximum thesis score). Supervisor: Prof. Nguyen Gia Dinh
- Graduated in the top 10 of 150 students

Employment

Graz University of Technology — Graz, Austria
University Assistant/Project Assistant and PhD Candidate — *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
- Co-supervised 5 bachelor and master theses, two of which yielded peer-reviewed publications (AAAI 2026, PAIS/ECAI 2023)

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

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)

Selected Publications

According to Google Scholar (May 2026): **775 citations**, h-index **13**, i10-index **17**, across more than 50 peer-reviewed papers. Full list at manleviet.github.io/publications.html.

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**

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***

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)*

Internship Grant, Wallonie-Bruxelles International 2011
Supporting a 7-month research internship at Catholic University of Louvain, Belgium

AUF Master's Scholarship 2008 – 2011
Agence Universitaire de la Francophonie – Master of Computer Science program at IFI, Vietnam

Outstanding Student Award in Computer Science 2004
Ministry of Science and Technology of Vietnam – top 100 CS students nationwide, sponsored by Motorola

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

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
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)

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

Full Professor, Institute of Software Engineering and AI, Graz University of Technology

- Address: Inffeldgasse 16b/II, 8010 Graz, Austria
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Assoc. Prof. Dr. Truong Tan Quan — Long-term Colleague

Rector, University of Economics, Hue University, Vietnam

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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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