VO THI HOANG QUANH

Research Interests: Operations Research · Mathematical Optimisation · Production Scheduling
Metaheuristics · Sustainable Operations · Industry 5.0
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EDUCATION

MASTER OF ENGINEERING IN LOGISTICS & SUPPLY CHAIN MANAGEMENT
Ho Chi Minh City International University (HCMIU), Vietnam National University, Vietnam
GPA: 3.6/4.0 (Feb 2025 – Expected Dec 2026)

Awarded a full-course Master's Admissions Scholarship, covering 100% of tuition fees

Thesis (defended 17 Nov 2026): "Hierarchical Energy-Efficient Scheduling in Semiconductor Assembly and Test Hybrid Flow Shops"

- Formulated a four-stage MILP (job sequencing, machine assignment, burn-in batching, tester speed selection) under a lexicographic tardiness–energy objective, and developed an Extended Teachers' TLBO (E-TTLBO) with a feasibility-preserving batch-packing decoder.
- Reduced energy consumption by 8.8–21.7% without increasing tardiness, with ≥80% lexicographic win rates against Lex-GA (17/18 configurations) and Simulated Annealing (16/18).

Relevant Coursework: Import–Export Management (92/100); Project Management (90/100); Supply Chain Systems (85/100); Research Methodology (84/100); Inventory Control & Management (83/100); Engineering Economics (81/100)

BACHELOR OF ENGINEERING IN LOGISTICS & SUPPLY CHAIN MANAGEMENT
Ho Chi Minh City University of Technology (HCMUT), Vietnam National University, Vietnam
GPA: 3.57/4.0 (Oct 2020 – Aug 2024)

Thesis: "Comprehensive Six Sigma Application: A Case Study of a Cold-Rolled Steel Manufacturing Company in Vietnam"

- Applied the Six Sigma DMAIC framework in a four-month industrial project on thickness variation in cold-rolled steel, raising thickness yield from 81.6% to 95.82% (project target: 90%).
- Defended the thesis in English with a score of 9.6/10.0, the highest in the graduating cohort, and developed the study into a first-author Springer publication.

Relevant Coursework: Logistics Management (95/100); Supply Chain Management (95/100); Systems Engineering (90/100); Forecasting Engineering (88/100); Production Management (85/100); Operations Research (83/100); Facilities Planning (83/100); Decision-Making Models in Supply Chain (83/100)

PUBLICATIONS

Peer-Reviewed Journal Articles

First Author. (2026). Lexicographic Energy-Efficient Scheduling in Semiconductor Assembly and Test Hybrid Flow Shops. **Computers, Materials & Continua**. **DOI**: 10.32604/cmc.2026.088630

First Author. (2024). Identifying Factors Affecting Thickness in the Cold-Rolling Process of Stainless-Steel Products. **Journal of Science and Technology**, 64(9), 126–129. Available via the Vietnam Science and Technology Publications Database, Ministry of Science and Technology.

Co-author. (2026). How Does Green Perceived Value Drive Green Purchase Intention? The Parallel Mediating Roles of Green Trust and Customer Engagement. **Innovative Marketing**, 22(3), 335–353. **DOI**: 10.21511/im.22(3).2026.21

Co-author; Corresponding Author. (2025). Comparative Analysis and Framework Development for Global Innovation Ecosystems: Insights from the Bay Area, Europe and China. **Multidisciplinary Science Journal**, 8(4), 2026236. **DOI:** 10.31893/multiscience.2026236

Co-author; Corresponding Author. (2025). Leveraging IT and Culture for Enhanced Logistics Capability and Performance. **Journal of Distribution Science**, 23(4), 13–23. **DOI:** 10.15722/jds.23.04.202504.13

Manuscripts Under Review

Sole Author. Energy-Efficient Hybrid Flow Shop Scheduling in Semiconductor Back-End Manufacturing with Burn-In Batching and Multi-Site Testing. Under review at **The International Journal of Advanced Manufacturing Technology** (submitted 30 Oct 2026).

Research in Progress

First Author. Manuscript in preparation. Rest as a Decision in the Flexible Job Shop with Worker Assignment: Why Fatigue-Aware Schedules Cannot Rely on Idle Time.

Books & Textbooks

Co-author. (2025). Logistics Service Management. Saigon International University. Official textbook adopted for a 3-credit undergraduate course in Logistics and Supply Chain Management.

Book Chapters

First Author. (2024). Comprehensive Six Sigma Application: A Case Study of Cold-Rolled Steel Manufacturing Company in Vietnam. In EAI International Conference on Renewable Energy and Sustainable Manufacturing (EAI ICRESM 2023). EAI/Springer Innovations in Communication and Computing. **Springer**. **DOI:** 10.1007/978-3-031-60154-5_43

International Conference Proceedings

First Author. (2023). Applying the AHP Process to Select Policy Implications to Improve Employee Performance: A Case Study of Joint Stock Commercial Banks in Ho Chi Minh City. In **Proceedings of the 4th International Conference on Applied Convergence Engineering**. Available at ICACE 2023 Proceedings.

EXPERIENCE

Research Experience and Academic Service

Conference Reviewer | 4th EAI International Conference on Renewable Energy and Sustainable Manufacturing (Sep 2026)

Reviewed two conference submissions on energy poverty and cold-chain logistics.

Research Mentor | Logistics System Lab, Ho Chi Minh City University of Technology, Vietnam (Jun 2026 – Present)

- Guided new undergraduate lab members in research methods, systematic literature reviews and critical analysis of scientific papers under the supervisor's direction.
- Co-organised international academic conferences with faculty members, coordinating logistics and activities for more than 100 delegates.

Project Manager | Institute of Manufacturing Technology and Business, Vietnam (Mar 2026 – Present)

Lead two R&D projects in rice processing: optimising post-harvest preservation parameters for premium ST25 rice and designing the system architecture and equipment layout for an automated rice drying and milling plant.

Full-time Research Assistant | Saigon International University, Vietnam (Dec 2024 – Dec 2025)

Contributed to research projects on "*Sustainable coastal night-time economies through logistics and supply chain optimisation*" through grant proposal drafting, systematic literature review, manuscript revision and report preparation for journal publication.

Teaching Experience

Teaching Assistant | University of Finance – Marketing, Vietnam (Sep 2025 – Jan 2026)

Independently delivered 30 of the course's 60 contact hours for "*AI Applications in Logistics and Supply Chain Optimization*", teaching entirely in English to more than 30 third-year students. Shared responsibility for course delivery with the lead professor, including classroom instruction, learning support and student assessment.

Professional Experience

Process and Operations Engineer Intern | Intel Corporation, Vietnam (Jun 2023 – Aug 2024)

- Designed and deployed a Microsoft Power Apps workflow that automated a previously manual process, reducing cycle time by about 80%, from four hours to 50 minutes.
- Built Power BI dashboards that consolidated production data and visualised factory performance KPIs, improving operational visibility and supporting data-driven performance reviews.

Quality Engineering Intern | POSCO VST, Vietnam (Mar – Jun 2023)

Contributed to Failure Mode and Effects Analysis to identify and mitigate process risks in cold-rolled steel production.

HONOURS, SCHOLARSHIPS & GRANTS

Scholarships

Taiwan Experience Education Programme, Taiwan (Jun – Jul 2026)

Awarded a fully funded research fellowship under a Taiwan Ministry of Education initiative. Conducted research under Asst. Prof. Nguyen Thi My Hanh on energy-efficient scheduling for semiconductor back-end manufacturing at the Global Logistics and Innovative Optimization Lab, Department of Industrial Engineering and Management, Yuan Ze University.

The 21st AmCham Scholarship Programme, Vietnam (Jun 2023)

Selected as 1 of 60 scholars from 600+ nationwide applicants by the American Chamber of Commerce in Vietnam, recognising academic excellence, leadership potential and international integration.

Specialists' Community Action and Leadership Exchange (SCALE) Programmes, Singapore (Sep 2022, Mar 2023)

Awarded a fully funded regional youth leadership and immersion scholarship, supported by the Temasek Foundation and delivered through collaboration among Singapore polytechnics and ASEAN educational institutions, with a focus on leadership, sustainability and community engagement.

AmCham Women in Engineering Scholarship Programme, Vietnam (Nov 2022)

Awarded a competitive scholarship recognising outstanding female engineering students in Vietnam for academic excellence, leadership potential and contribution to the engineering community.

Research Grants & Academic Awards

Student Scientific Research Programme, Research Grant, Vietnam (Oct 2023)

Ho Chi Minh City University of Technology, Project code: SVKSTN-2023-CK-16. Secured a research grant of VND 21,000,000 for the project "Application of Six Sigma to Improve Quality in the Cold-Rolled Stainless Steel Coil Production Process".

Arizona State University E-Projects Competition, Vietnam (Apr 2023)

Project: "Digital Twin for Manufacturing Using Emulate3D and Programmable Logic Controller". Received the Most Effective Teamwork and Best Presentation awards.

Rector's Certificate of Merit, Vietnam (Mar 2023)

Awarded by Ho Chi Minh City University of Technology for outstanding achievements in scientific research.

USAID BUILD-IT and Dow Vietnam STEM Programme, Vietnam (Feb 2022)

Project: "Machine Learning Application That Translates Sign Language into Speech". Recognised as a national finalist and advanced to the final showcase.

LEADERSHIP & COMMUNITY ENGAGEMENT

Tutoring Club, Ho Chi Minh City University of Technology (HCMUT), Vietnam National University, Vietnam

President (Oct 2022 – Oct 2023)

Vice President (Oct 2021 – Oct 2022)

- Led a student-run academic support club delivering one-to-one tutoring and group classes of 30+ learners across school and undergraduate subjects.
- Led the club's participation in the 2023 Green Summer Volunteer Campaign, delivering study-skills and life-skills sessions in Ho Chi Minh City.
- Established in 2016, the club has developed a cumulative network of approximately 1,000 tutors and currently has around 100 members. It received the Rector's Certificate of Merit for Outstanding Club in 2023.

SKILLS

Optimisation modelling: MILP formulation, including lexicographic multi-objective optimisation; exact solution using IBM ILOG CPLEX and SCIP

Algorithm design: Metaheuristics and feasibility-preserving decoders for scheduling, including batching, speed selection, worker assignment and rest scheduling

Computational experiments: Python (NumPy, SciPy, Matplotlib, multiprocessing); algorithm comparison using Wilcoxon signed-rank and Friedman tests; reproducible code and benchmark instances on GitHub

Languages: Vietnamese (native); English (both undergraduate and master's theses written and defended in English; IELTS Academic 7.0, October 2026)