Visarut Huayshelake

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EDUCATION

Chulalongkorn University　　　　　　　　　　　　　　　　　　　　　　　Bangkok, Thailand
Ph.D. Student in Applied Mathematics and Computational Science　　　　　　　*Aug 2025 — Present*
- Interim enrollment while securing placement for Ph.D. studies abroad under the DPST Scholarship requirements
- Relevant Coursework: Elementary Machine Learning, Time Series Analysis

Chulalongkorn University　　　　　　　　　　　　　　　　　　　　　　　Bangkok, Thailand
M.Sc. in Applied Mathematics and Computational Science　　　　　　　　　　*Aug 2022 — Sep 2025*
- Thesis: Two-Dimensional Simulation of Contaminant Transport and Treatments in Groundwater System
- Relevant Coursework: Numerical Analysis I, Applied Linear Algebra, Applied Analysis, Method of Applied Mathematics

Kanazawa University　　　　　　　　　　　　　　　　　　　　　　　　Ishikawa, Japan
M.Sc. in Computational Mathematics (Double Degree Program With CU)　　　　*Oct 2022 — Aug 2024*
- Thesis: Lagrange-Galerkin Scheme for Groundwater Contaminant Models
- Relevant Coursework: Applied Analysis a & b, Data Science in Society 5.0

Walailak University　　　　　　　　　　　　　　　　　　　Nakhon Si Thammarat, Thailand
B.Sc. in Computational Science (First Class Honors)　　　　　　　　　　　*Jul 2018 — Apr 2022*
- Project: Two-dimensional numerical simulation of pollution diffusion from a waste dump
- Relevant Coursework: Real Analysis I & II, Introduction to FEM, Introduction to Numerical Methods for PDEs

SCHOLARSHIP

The Development and Promotion of Science and Technology Talents Project Scholarship (DPST)
Royal Government of Thailand　　　　　　　　　　　　　　　　　　　　*2018 — Present*

PUBLICATION

- **Huayshelake, V.** and Mekchay, K. (2025). Numerical Simulation of Contaminant in Transient Groundwater System. *AMM 2025 Conference Proceedings*, Thailand.

SELECTED TALKS

- Numerical Simulation of Contaminant in Transient Groundwater System, *The 29th Annual Meeting in Mathematics*, Bangkok, Thailand, May. 2025.
- Sum of Products of Two Consecutive Primes, *The 48th International Congress on Science, Technology and Technology-based Innovation*, Nakhon Si Thammarat, Thailand, Dec. 2022.

TEACHING AND PUBLIC OUTREACH

Calculus II (International Program)　　　　　　　　　　　　　　　　　　2025, 2024
Teacher Assistant
- Graded weekly quizzes and provided feedback to support student learning and improvement
- Led tutoring sessions to prepare students for midterm and final examinations

Calculus for Business I (International Program)　　　　　　　　　　　　　　2025
Teacher Assistant
- Graded weekly quizzes and assigned homeworks
- Led tutoring sessions to prepare students for midterm and final examinations

Basic in Calculus (International Program)　　　　　　　　　　　　　　　　2025
Teacher Assistant
- Advised incoming students on problem-solving strategies for university calculus
- Provided feedback on student exercises to reinforce foundational concepts

RESEARCH SKILLS

- **Scientific Computing and Simulation:** Experience in implementing numerical solvers for PDEs using C++ and FreeFEM
- **Mathematical Analysis:** Proficient in convergence analysis and energy estimate for numerical schemes
- **Machine Learning Interest:** Currently studying Deep Learning frameworks and Physics-Informed Neural Networks (PINNs) to bridge numerical methods with AI
- **Programming and Tools**: Python, C++, MATLAB, FreeFEM, Git

SKILLS

- **Languages:** Thai (Native), English (TOEFL-ITP 550), Japanese (JLPT N4)
- **Documentation Tools**: LaTeX, Microsoft Office

REFERENCES

Assoc. Prof. Dr. Khamron Mekchay (Thesis Advisor)
Department of Mathematics and Computer Science, Chulalongkorn University
Email: Khamron.M@chula.ac.th

Assoc. Prof. Dr. Petarpa Boonserm
Department of Mathematics and Computer Science, Chulalongkorn University
Email: petarpa.boonserm@gmail.com