

Arnon Archankul

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Department of Mathematics and Statistics, Faculty of Science and Technology

Thammasat University, Pathum Thani, Thailand 12121

PROFESSIONAL SUMMARY

Applied mathematician with a PhD in mathematical finance, specialising in stochastic control, game theory, and decision-making under uncertainty. Strong background in probability theory, stochastic calculus, differential equations, numerical methods, and programming. Experienced in teaching mathematical finance, including portfolio theory, options pricing, and continuous-time finance. Interested in applying analytical and quantitative methods to problems in economics, finance, operations research, and related fields.

EDUCATION

University of York 2021–2026
Doctor of Philosophy in Mathematics York, United Kingdom

- **Thesis:** Singular Control, Ambiguity and Real Options
- **Supervisor:** Professor Jacco Thijssen

University of York 2019–2020
Master of Science in Mathematical Finance York, United Kingdom

- **Award mark:** 78% with Distinction
- **Thesis:** A Closed-Form Pricing Formula for European Options under the Heston Model with Stochastic Interest Rate
- **Supervisor:** Professor Zdzisław Brzeźniak

Walailak University 2014–2018
Bachelor of Science in Computational Science Nakhon Si Thammarat, Thailand

- **GPA:** 3.84/4.00, First Class Honours
- **Thesis:** 2D Simulation of Air Pollution Emitted from an Industrial Factory
- **Supervisor:** Associate Professor Sanae Rujivan

Triam Udom Suksa School of the South 2011–2014
Science and Mathematics Programme Nakhon Si Thammarat, Thailand

- **GPA:** 3.62/4.00

WORK EXPERIENCE

Thammasat University 2026–Present
Lecturer in Mathematics Pathum Thani, Thailand

RESEARCH EXPERIENCE

Interdisciplinary Center for Scientific Computing (IWR), Heidelberg University 2017
Short-term internship on the simulation of air-pollution distribution Heidelberg, Germany

- **Supervisor:** Professor Peter Bastian

Large Scale Simulation Research, National Electronics and Computer Technology Center 2016
Short-term research on numerical methods for heat diffusion Pathum Thani, Thailand

- **Supervisor:** Dr Sirot Sirisap

TEACHING EXPERIENCE

Department of Mathematics, University of York

Graduate Teaching Assistant

2021–2025

York, United Kingdom

- Mathematical Finance I (2021 - 2023)
- Mathematical Finance II (2022 - 2023)
- Mathematical Finance in Continuous Time (2024)
- Mathematical Finance in Discrete Time (2024 - 2025)

Division of Mathematics and Statistics, School of Science, Walailak University

Teaching Assistant for Linear Algebra and its Applications

2016

Nakhon Si Thammarat, Thailand

PUBLICATIONS

- [1] Rakwongwan, U., Archankul, A., Rujivan, S., & Bastian, P. (2021). **The Numerical Visualization of Air Pollution Propagation from a Single Generator to an Observed Area.** *Chiang Mai Journal of Science*, 48(5), 1430–1443. <https://epg.science.cmu.ac.th/ejournal/journal-detail.php?id=11547>
- [2] Archankul, A., Ferrari, G., Hellmann, T., & Thijssen, J. J. J. (2025). **Singular Control in a Cash Management Model with Ambiguity.** *European Journal of Operational Research*. <https://doi.org/10.1016/j.ejor.2025.07.023>

PEER REVIEW

- *Mathematics and Financial Economics*, Springer Nature. Review date: 2025.

CONFERENCES

Computational Science Summer School 2026

Oral presentation: *Singular Stochastic Control in Real Investments*

2026

Bangkok, Thailand

- **Organiser:** Mahidol University

33rd European Conference on Operational Research

Oral presentation: *Singular Control in Inventory Management with Smooth Ambiguity*

2024

Copenhagen, Denmark

- **Organiser:** Technical University of Denmark

13th Conference on Science and Technology for Youths

Oral and poster presentation: *2D Simulation of Air Pollution Emitted from an Industrial Factory*

2018

Bangkok, Thailand

- **Organiser:** The Institute for the Promotion of Teaching Science and Technology (IPST), Thailand

CMU–IWR Summer School 2018

Oral presentation: *2D Simulation of Air Pollution Emitted from an Industrial Factory*

2018

Chiang Mai, Thailand

- **Organiser:** Interdisciplinary Center for Scientific Computing (IWR), Heidelberg University, Germany

AWARDS

Best Oral Presentation for Research Project in Applied Mathematics

13th Conference on Science and Technology for Youths

2018

Bangkok, Thailand

- **Organiser:** The Institute for the Promotion of Teaching Science and Technology (IPST), Thailand

PhD Scholarship

Development and Promotion of Science and Technology Talents Project (DPST)

2014–2026

Thailand

- **Funded by:** The Royal Government of Thailand

SKILLS

- **Research areas:** Stochastic control, optimal stopping games, options pricing, computational finance, stochastic volatility, computational fluid dynamics

- **Programming languages:** Python, C++, Java
- **Mathematical and statistical software:** MATLAB, Mathematica, SPSS
- **Other tools:** Microsoft Office, L^AT_EX

ADDITIONAL INFORMATION

- **Languages:** Thai, native; English, proficient
- **Interests:** Badminton, gym, hiking, cycling, swimming, running, football, reading, cooking, and films

REFERENCES

1. **Professor Jacco Thijssen**
Professor, Department of Mathematics
University of York, United Kingdom
Email: jacco.thijssen@york.ac.uk
Phone: +44 1904 325004
Relationship: PhD thesis supervisor
2. **Professor Zdzisław Brzeźniak**
Professor, Department of Mathematics
University of York, United Kingdom
Email: zdzislaw.brzezniak@york.ac.uk
Phone: +44 1904 324154
Relationship: MSc thesis supervisor
3. **Associate Professor Sanae Rujivan**
Associate Professor, School of Science
Walailak University, Thailand
Email: rsanae@wu.ac.th
Relationship: BSc thesis supervisor