Naso Evangelou-Oost

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Education

The University of Queensland St Lucia, AU
Ph.D. in Computer Science
- Thesis: "Concurrent valuation algebras"
- Advisors: Larissa Meinicke, Ian J. Hayes

The University of Queensland St Lucia, AU
B.Math. in Pure Mathematics (Honours Class I), GPA: 7.0/7.0
- Thesis: "Homological aspects of Morse-Bott theory"
- Advisor: Joseph F. Grotowski

University of Tasmania Sandy Bay, AU
B.Sci. in Pure Mathematics (Honours) (incomplete; 80% coursework completed), GPA: 7.0/7.0
- Thesis: "Combinatorial structures on non-crossing partitions"
- Advisor: Des G. FitzGerald

University of Tasmania Sandy Bay, AU
B.Sci. in Pure Mathematics, GPA Maj.: 6.9/7.0

Experience

Sirius-beta Labs Brisbane, AU
Senior Mathematician 2022–
- Lead a project funded by the Defence Science and Technology Group (DST) through their Next Generation Technology Fund (NGTF)
- This project falls under an Industry Competitive Evaluation Research Agreement (ICERA), managed by the Information Warfare STaR Shot initiative

Oneironaut Brisbane, AU
Founder 2022–
- Independent consultancy for mathematical research and software development
- Utilising artificial intelligence, applied category theory, formal methods, functional programming

Independent Consultant AU
Mathematician, Developer, Technician, Tutor 2014–2021
- Independent consultant for mathematical research, information technology, and education

An Tien AMA Dalat VN
Teacher of English as a Foreign Language 2013–2014
- Experienced TOEFL teacher skilled in preparing students for English language proficiency exams and delivering engaging lessons tailored to meet individual needs

Publications

[1] A. Evangelou-Oost, "Concurrent valuation algebras", eng, Ph.D. dissertation, 2025. [Online]. Available: https://espace.library.uq.edu.au/view/UQ:0fd38e8.

[2] T. Goranson, B. Cardier, M. Hancock, **Evangelou-Oost, N.**, B. J. Seligmann, M. Garcia, *et al.*, "User affordances to engineer open world enterprise dynamics", in *Interdependent Human-Machine Teams: The Path to Autonomy*, W. F. Lawless, R. Mittu, D. A. Sofge, and H. Fouad, Eds., Elsevier, 2024. [Online]. Available: https://www.sciencedirect.com/science/article/abs/pii/B9780443292460000067.

[3] I. J. Hayes, L. Meinicke, and **Evangelou-Oost, N.**, "Restructuring a concurrent refinement algebra", in *Proceedings of the 2024 Conference on Relational and Algebraic Methods in Computer Science (RAMiCS 2024)*, 2024. [Online]. Available: https://link.springer.com/chapter/10.1007/978-3-031-68279-7_9.

[4] **Evangelou-Oost, Naso**, L. Meinicke, C. Bannister, and I. J. Hayes, "Trace models of concurrent valuation algebras", in *Formal Methods and Software Engineering*, Y. Li and S. Tahar, Eds., Singapore: Springer Nature Singapore, 2023, pp. 118–136, ISBN: 978-981-99-7584-6. [Online]. Available: https://link.springer.com/chapter/10.1007/978-981-99-7584-6_8.

[5] **Evangelou-Oost, Nasos**, C. Bannister, and I. J. Hayes, "Contextuality in distributed systems", in *Relational and Algebraic Methods in Computer Science*, R. Glück, L. Santocanale, and M. Winter, Eds., Cham: Springer International Publishing, 2023, pp. 52–68, ISBN: 978-3-031-28083-2. [Online]. Available: https://link.springer.com/chapter/10.1007/978-3-031-28083-2_4.

[6] I. Dolinka, J. East, **Athanasios Evangelou**, D. FitzGerald, N. Ham, J. Hyde, N. Loughlin, and J. D. Mitchell, "Enumeration of idempotents in planar diagram monoids", *Journal of Algebra*, vol. 522, pp. 351–385, 2019, ISSN: 0021-8693. [Online]. Available: https://www.sciencedirect.com/science/article/pii/S0021869318306550.

[7] I. Dolinka, J. East, **Athanasios Evangelou**, D. FitzGerald, N. Ham, J. Hyde, and N. Loughlin, "Enumeration of idempotents in diagram semigroups and algebras", *Journal of Combinatorial Theory, Series A*, vol. 131, pp. 119–152, 2015, ISSN: 0097-3165. [Online]. Available: https://www.sciencedirect.com/science/article/pii/S0097316514001563.

Teaching

- **Teaching Assistant** at The University of Queensland — 2021, 2022
  Functional & Logic Programming (COMP 3400)
- **Teaching Assistant** at The University of Queensland — 2021, 2022
  Reasoning About Programs (CSSE 3100)
- **Teaching Assistant** at The University of Queensland — 2021
  Concurrency: Theory and Practice (CSSE 7610)

Supervision

- **Alexander Knight**, The University of Queensland — 2025
  Implementation of Generic Inference in Haskell, Master's Thesis
- **James Noonan**, Australian National University — 2024, 2025
  Conditional Valuation Algebras: Directionality and Efficient Inference, Honours Thesis

Skills

- **Programming:** Haskell, F#, Python, Isabelle/HOL, Mathematica
- **Machine Learning:** Scikit-Learn, Keras, PyTorch
- **Tools/Techs:** SQL, Git, LaTeX
- **Web:** TypeScript

Languages

- **English:** Mother tongue
- **French:** Proficient, DALF C1
- **Vietnamese:** Beginner
- **German:** Beginner

Scholarships and Awards

- Ethel Raybould Prize in Mathematics, The University of Queensland 2020
- Category 1 Earmarked RTP scholarship, The University of Queensland 2020–2023
- Dean's Commendation for Academic Excellence, The University of Queensland 2018, 2019
- Tasmania Honours Scholarship, University of Tasmania 2012
- Dean's Roll of Excellence, University of Tasmania 2010, 2012

Contributed Talks

- The 24th International Conference on Formal Engineering Methods (ICFEM), Brisbane 2023
  Trace models of concurrent valuation algebras
- School of Electrical Engineering & Computer Science (EECS), Research Seminar, The University of Queensland 2023
  Concurrent valuation algebras
- Formal Methods in Australia/New Zealand (FMOZ), The University of Queensland 2023
  Trace models of concurrent valuation algebras
- Relational and Algebraic Methods in Computer Science (RAMiCS), Technologiezentrum Augsburg 2023
  Contextuality in distributed systems
- School of Electrical Engineering & Computer Science (EECS), Research Seminar, The University of Queensland 2023
  Contextuality in distributed systems
- Formal Methods in Australia/New Zealand (FMOZ), The University of Queensland 2022
  Modelling distributed specifications with simplicial sets
- School of Electrical Engineering & Computer Science (EECS), Research Seminar, The University of Queensland 2021
  Progress and sheaves in concurrent refinement algebra
- School of Mathematics & Physics (SMP), Analysis Seminar, The University of Queensland 2019
  Homological aspects of Morse-Bott theory
- School of Mathematics & Physics (SMP), Special Topics, The University of Queensland 2019
  Hodge theory
- School of Mathematics & Physics (SMP), Special Topics, The University of Queensland 2018
  Čech cohomology of a cover
- School of Mathematics and Physics (SMP), Quantum Field Theory Seminar, The University of Queensland 2018
  Representation theory of semisimple Lie algebras
- School of Natural Sciences, Mathematics Seminar, University of Tasmania 2015
  Combinatorial structures on non-crossing partitions

Organisation

- Co-organiser of a Category Theory reading group with Angela Wren, The University of Queensland 2021
  Text: "Basic Category Theory" by Tom Leinster
- Organiser of a Topos Theory reading group, The University of Queensland 2020
  Text: "Sheaves in Geometry and Logic: A First Introduction to Topos Theory" by Saunders Mac Lane and Ieke Moerdijk