HONG T.M. CHU ⓘ

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RESEARCH INTERESTS

Computational approaches to optimal transport and Wasserstein distributionally robust optimization problems.

EMPLOYMENT

2024 - now	**Assistant Professor** College of Engineering & Computer Science, VinUniversity Vietnam
2023 - 2024	**Research Fellow** Department of Mathematics, National University of Singapore Singapore
2017 - 2018	**Research Assistant** Institute of Mathematics, Vietnam Academy of Science and Technology Vietnam

EDUCATION

2018 - 2023	**Ph.D** Department of Mathematics, National University of Singapore Singapore (Supervisor: Professor Kim-Chuan Toh)
2013 - 2017	**Bachelor of Mathematics** Faculty of Mathematics & Information Technology, Hanoi National University of Education, Vietnam

PUBLICATIONS & PREPRINTS

2025 — **Tight Robustness Certificates and Wasserstein Distributional Attacks for Deep Neural Networks**
Bach C. Le, Tung V. Dao, Binh T. Nguyen, Hong T.M. Chu
Submitted.

2024 — **Implicit Regularization via Spectral Neural Networks and Non-linear Matrix Sensing**
Hong T. M. Chu, Subhro Ghosh, Chi Thanh Lam, Soumendu Sundar Mukherjee

2023 — **Wasserstein distributionally robust optimization and its tractable regularization formulations**
Hong T.M. Chu, Meixia Lin, Kim-Chuan Toh.
Submitted.

2023 — **A Corrected Inexact Proximal Augmented Lagrangian Method with a Relative Error Criterion for a Class of Group-quadratic Regularized Optimal Transport Problems**
Lei Yang, Ling Liang, Hong T.M. Chu, Kim-Chuan Toh.
Journal of Scientific Computing 99 (3), 79.

2021 — **On Regularized Square-root Regression Problems: Distributionally Robust Interpretation and Fast Computations**
Hong T.M. Chu, Kim-Chuan Toh, Yangjing Zhang.
Journal of Machine Learning Research, 23(308):1–39.

2020 — **An efficient implementable inexact entropic proximal point algorithm for a class of linear programming problems**
Hong T. M. Chu, Ling Liang, Kim-Chuan Toh, Lei Yang.
Computational Optimization and Applications, (2023): 1-40.

SELECTED HONORS AND AWARDS

2021	**Teaching award** ↗
	Part-time teaching assistant award AY 2020/2021
	Faculty of Science, National University of Singapore, Singapore

2020	**Teaching award** ↗
	Part-time teaching assistant award AY 2019/2020
	Faculty of Science, National University of Singapore, Singapore

TALKS & PRESENTATIONS

October 2025	**International Workshop on Weakly Supervised Learning, Southeast University**
	Nanjing, China

June 2023	**SAMI, Hanoi University of Science and Technology**
	Hanoi, Vietnam

May 2023	**SIAM Conference on Optimization**
	Seattle, USA

March 2023	**The 6th Mathematics Symposium in Singapore**
	Singapore

ADMINISTRATIVE EXPERIENCE

2023 - 2028	**Ambassador**
	Appointment as Faculty of Science Postgraduate Alumni Ambassador (FPAA)
	National University of Singapore, Singapore

Spring 2024	**Preliminary & Final Judge**
	Singapore Science & Engineering Fair (SSEF)
	MoE, A*STAR and SCS, Singapore

Jan 2024	**Member** ↗
	The Mathematics of Data, Institute for Mathematical Sciences, Singapore

PEDAGOGICAL EXPERIENCE

Fall 2024	**Lecturer, MATH2010**
	Probability & Statistics (VinUniversity)
	Average student rating: 4.68/5.0

Spring 2022, Fall 2021, Fall 2020	**Teaching assistant, DSA3102**
	Essential Data Analytics Tools: Convex Optimisation (National University of Singapore)
	Average student rating: 4.1/5.0

Spring 2020	**Teaching assistant, MA3252**
	Linear and Network Optimisation (National University of Singapore)
	Average student rating: 4.4/5.0

Fall 2019	**Teaching assistant, MA1102R**
	Calculus (National University of Singapore)
	Average student rating: 4.4/5.0

PROGRAMMING LANGUAGES

MATLAB, PYTHON