HONG T.M. CHU [iD]

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RESEARCH INTERESTS

Computational approaches to optimal transport and Wasserstein distributionally robust optimization problems

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

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   **Researcher**
Institute of Mathematics, Vietnam Academy of Science and Technology
Vietnam

PUBLICATIONS & PREPRINTS

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

PRESENTATIONS

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

Spring 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