

Du CHEN (陈督)

PhD Candidate in Operations Management | [Google Scholar](#) [LinkedIn](#) [GitHub](#) [Personal Page](#)
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Research Interests

Topics: Data Privacy, Privacy-Aware Operations in Supply Chains, Online Platforms, and Public Policy
Methodologies: Convex Optimization, Differential Privacy, Statistical Learning

Education

Nanyang Technological University, Singapore

PhD in Operations Management 2021 – 2026 (expected)
Thesis: Privacy-Aware Operations Management: Design and Analysis of Algorithms with Differential Privacy

Shanghai Jiao Tong University, Shanghai, China

MSc in Management Science and Engineering 2017 – 2021

Xi'an University of Electronic Science and Technology, Xi'an, China

BSc in Information Management and Information Systems 2013 – 2017

Working Papers

1. Du Chen, Geoffrey A. Chua*. **An Algorithmic Approach to Managing Supply Chain Data Security: The Differentially Private Newsvendor** [[Preprint](#)]
 - Under Minor Revision at **Operations Research** (Pending Code Submission; Machine Learning and Data Science Department)
2. Du Chen, Geoffrey A. Chua, Victor Richmond R. Jose*. **Joint Differential Privacy for Resource Allocation: Protection Capability, Price of Privacy, Algorithm Design, and Policy Implications** [[Preprint](#), INFORMS Job Market Showcase Session: SB09, 11 AM]
 - Under 2nd-Round Review at **Management Science** (Optimization Department)
 - Winner of the Best Paper Award at Singapore Rising Scholars Conference 2025
 - Awardee of the IFORS Travelling Fellowship (\$500) at the APORS Youth Forum 2025
3. Du Chen, Youhua (Frank) Chen*, Geoffrey A. Chua. **Design and Analysis of Algorithms for Privacy-Aware Online Allocation under Heterogeneous Privacy Expectations** [[Preprint](#)]
 - Under Review at **Operations Research** (Machine Learning and Data Science Department)

Selected Publications

1. Du Chen*, Geoffrey A. Chua. **Exploiting Hidden Symmetry to Improve Objective Perturbation for DP Linear Learners with a Nonsmooth L1-Norm** [[Paper](#)]
 - The Thirteenth International Conference on Learning Representations (**ICLR 2025**)
2. Du Chen*, Geoffrey A. Chua. **Noisy Dual Mirror Descent: A Near Optimal Algorithm for Jointly-DP Convex Resource Allocation** [[Paper](#)]
 - The Thirty-eighth Annual Conference on Neural Information Processing Systems (**NeurIPS 2024**)
3. Du Chen*, Geoffrey A. Chua. **Differentially Private Stochastic Convex Optimization under a Quantile Loss Function** [[Paper](#)]
 - The Fortieth International Conference on Machine Learning (**ICML 2023**)

Selected Presentations

- **An Algorithmic Approach to Managing Supply Chain Data Security: The Differentially Private Newsvendor**
 - 2025-07, 2025 INFORMS International Conference, Singapore
 - 2024-07, The 33rd European Conference on Operational Research, Copenhagen, Denmark
 - 2024-01, The 14th POMS-HK International Conference (POMS-HK 2024), Hong Kong, China
 - 2023-01, The 13th POMS-HK International Conference (POMS-HK 2023), Hong Kong, China
- **Joint Differential Privacy for Resource Allocation: Protection Capability, Price of Privacy, Algorithm Design, and Policy Implications**
 - 2025-10, 2025 INFORMS Annual Meeting, Atlanta, USA (**Session info: SB09, 11 AM**)
 - 2025-07, 2025 INFORMS International Conference, Singapore
 - 2025-06, 2025 INFORMS MSOM Conference, London, UK
 - 2025-06, The 34th European Conference on Operational Research, Leeds, UK
 - 2025-05, Singapore Rising Scholars Conference, Singapore
 - 2024-10, 2024 INFORMS Annual Meeting, Seattle, USA
- **Design and Analysis of Algorithms for Privacy-Aware Online Allocation under Heterogeneous Privacy Expectations**
 - 2025-10, 2025 INFORMS Annual Meeting, Atlanta, USA (**Session info: TE54, 4:15 PM**)
- **Exploiting Hidden Symmetry to Improve Objective Perturbation for DP Linear Learners with a Nonsmooth L1-Norm**
 - 2025-04, ICLR 2025, Singapore
- **Noisy Dual Mirror Descent: A Near Optimal Algorithm for Jointly-DP Convex Resource Allocation**
 - 2024-12, NeurIPS 2024, Vancouver, Canada
- **Differentially Private Stochastic Convex Optimization under a Quantile Loss Function**
 - 2023-07, ICML 2023, Hawaii, USA

Research Grants

- **Managing Data Security in Supply Chains: Algorithmic Approaches and Economic Implications**
 - MoE Singapore, Academic Research Fund Tier 1, SG\$60,000, 2024-2027. PI: Geoffrey A. Chua
 - *I drafted the research proposal*

Teaching Experience

Nanyang Technological University Singapore

- Instructor

Statistics & Analysis (BSc in Business, Core), 2025 Spring

- ✧ Class Size: 25
- ✧ Teaching Evaluation: 4.4/5 (response rate: 15/25)
- ✧ Duties: Deliver lectures and lead in-person 2-hour weekly seminars. Topics cover basic probability theory and applied statistics for business undergrads
- ✧ Student Feedback: "*his lectures are well-structured, engaging, and thoughtfully delivered*", "*(he) talked about real-world applications well*", and "*his explanations are also very clear*"

- Teaching Assistant

Operations & Supply Chains (REP Programme), 2022 Fall, 2023 Fall, 2024 Fall
Supply Chain Analytics (BSc in Business, Elective), 2023 Spring, 2024 Spring

Shanghai Jiao Tong University

- Teaching Assistant

Dynamic Pricing & Revenue Management (Graduate, Elective), 2020 Fall

Stochastic Dynamic Programming (Graduate, Elective), 2020 Fall

Quantitative Analysis (DBA, Core), 2019 Fall

Data, Model, Decision (International MBA, Elective), 2018 Fall

- **Guest Lecturer**

Applied Business Modelling (Graduate, Elective), 2019 Fall

Teaching Case: Huan Zheng, Yuanzheng Ma, **Du Chen**, Stephan Vachon. "Goodbaby Group: The Upfront Warehouse Decision", 9B20D018, Ivey Publishing [[Link](#)]

Industry Experience

Alibaba Group, Hangzhou, China

2020.04 – 2020.07 / 2021.03 – 2021.07

Operations Research Algorithm Intern / Engineer

Meituan, Beijing, China

2020.07 – 2020.09

Algorithm Engineer Intern

Professional Service

Reviewer for

ICLR (2025, 2026), NeurIPS (2025)

Session Chair for

INFORMS MSOM Conference (2025)

References

Geoffrey A. Chua (advisor)

Associate Professor of Operations Management; Academic Director, Nanyang MBA Programme

Nanyang Business School, Nanyang Technological University, Singapore

Email: gbachua@ntu.edu.sg

Victor Richmond R. Jose

Professor of Operations and Analytics; Operations & Analytics (OPAN) Area Chair

McDonough School of Business, Georgetown University, Washington, DC, USA

Email: vrj2@georgetown.edu

Youhua (Frank) Chen

Chair Professor of Management Science

College of Business, City University of Hong Kong, Hong Kong, China

Email: youhchen@cityu.edu.hk

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