

# Du CHEN (陈督)

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

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**Topics:** Data Privacy, Privacy-Aware Decision-Making & Operations in Supply Chains and Public Policy  
**Methodologies:** Convex Optimization, Differential Privacy, Statistical Learning

## Education

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<b>Nanyang Technological University</b> , Singapore	2021.8 – 2026.6 (expected)
PhD in Operations Management	
Thesis: Privacy-Aware Operations Management: Design and Analysis of Algorithms with Differential Privacy	
<b>Shanghai Jiao Tong University</b> , Shanghai, China	2017.9 – 2021.3
MSc in Management Science and Engineering	(Industry Leave: 2020.4 – 2021.7)
<b>Xi'an University of Electronic Science and Technology</b> , Xi'an, China	
BSc in Information Management and Information Systems	2013.9 – 2017.6

## Selected Publications

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1. **Du Chen**, Geoffrey A. Chua\*. *An Algorithmic Approach to Managing Supply Chain Data Security: The Differentially Private Newsvendor* [[Preprint](#)]  
- Accepted by **Operations Research**, 2025, forthcoming
2. **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**)
3. **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**)
4. **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**)

## Working Papers

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1. **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](#)]  
- In Preparation for Submission to **Operations Research** (rejected by Management Science after two rounds of review)  
- 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
2. **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**

## Selected Talks

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- **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
  - 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
- **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

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- **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

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### 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](#)]

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## Industry Experience

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**Alibaba Group**, Hangzhou, China

2020.4 – 2020.7 / 2021.3 – 2021.7

*Operations Research Algorithm Intern / Engineer*

**Meituan**, Beijing, China

2020.7 – 2020.9

*Algorithm Engineer Intern*

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## Professional Service

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### Reviewer for

ICLR (2025, 2026), NeurIPS (2025)

### Session Chair for

INFORMS MSOM Conference (2025)

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## References

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### 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](mailto: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](mailto: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](mailto:youhchen@cityu.edu.hk)

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