

# Donghao Zhu

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## EDUCATION

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- Technical University of Munich, Germany** 2019 – 2023 (expected)  
School of Computation, Information and Technology/School of Management  
Ph.D. candidate in Computer Science and Operation Research  
Advisor: Prof. Dr. Martin Bichler and Prof. Dr. Stefan Minner
- The University of Tokyo, Japan** 2016 – 2019  
Graduate School of Arts and Sciences  
M.Sc. in Multidisciplinary Sciences (Math & Computer Sciences)  
Advisor: Prof. Dr. Akira Kakimura and Prof. Dr. Naonori Kakimura
- SooChow University, China** 2012 – 2016  
B.A. in Engineering (Honors Program)

## RESEARCH INTERESTS

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*OM/OR Topics:* Platform Design, Matching, Queueing Theory, Policy & Data Analysis  
*Methodology:* Stochastic Modeling, Optimization, Agent-based Simulation, Reinforcement Learning  
*Theoretical Computer Science:* Complexity Analysis, Approximation Algorithm Design

## WORKING PAPERS (NOT FULLY DOCUMENTED)

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1. J. Baumler, M. Bullinger, S. Kober, **D. Zhu**. Superiority of Instantaneous Decisions in Thin Dynamic Matching. *To be submitted*, 2023.
  - Presented at UTMD (*The University of Tokyo Market Design Center*) Seminar, the University of Tokyo, Japan, 2022.
  - Personal talk at Tokyo Institute of Technology, Japan, 2022; Keio University, Japan, 2022.
2. N. Kakimura and **D. Zhu**. Dynamic Bipartite Matching Markets with Arrivals and Departures. *To be submitted*, 2023.
  - Presented at ACM WINE (*Web and Internet Economics*), 2021, Virtual; AdONE Retreat Seminar, Technical University of Munich, Germany 2019.
  - Personal talk at Tokyo Institute of Technology, Japan, 2022; Keio University, Japan, 2022.

## PROCEEDINGS

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1. J. Bäumlér, M. Bullinger, S. Kober and **D. Zhu**. Superiority of Instantaneous Decisions in Thin Dynamic Matching Markets. *ACM EC (Economics and Computation)*, 2023.
2. N. Kakimura and **D. Zhu**. Dynamic Bipartite Matching Market with Arrivals and Departures. *ACM WINE (Web and Internet Economics)*, 2021.

## WORK-IN-PROGRESS

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Available upon request.

## STUDENT ADVISING

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Master Thesis:

- “Dynamic Pricing Problem on Platform: Considering Relocation”, Management, TUM 2022
- “Flexible Batching in a Freight Exchange Platform”, Math, TUM 2020

Bachelor Thesis:

- “The Housing Market under a Supply Shortage”, Informatics, TUM 2021
- “Analysis of Business Models in the Sharing Economy”, Informatics, TUM 2020
- “Investigation of Batching Algorithms in Online Matching Markets”, Informatics, TUM 2020

Advanced Seminar Operations & Supply Chain Management at TUM 2021

- “One-to-one Matching Market: Pricing in Ride-hailing Platforms”, Management, TUM.
- “One-to-one Matching Market: a Survey”, Management, TUM.

## WORKING EXPERIENCE

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Research Assistant, ERATO Kawarabayashi Large Graph Project, National Institute of Informatics, Japan 2017 – 2019

## ACADEMIC SERVICE

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Journal Referee: *International Journal of Production Economics*  
Session Chair: MSOM (*Manufacturing & Service Operations Management*) Conference 2022  
Conference Organization Assistance: WITS (*Workshop on Information Technologies and Systems*) 2019

## SKILLS

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Programming/Software: Python, C, Gurobi, html, L<sup>A</sup>T<sub>E</sub>X, Matlab  
Language: English (fluent), Japanese (conversation), Chinese (native)

## REFERENCES

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Available upon request.