Donghao Zhu

☎ *(+81) 080 3700 1404*
✉ *dracotiers@yahoo.co.jp*
3-8-1, Komaba, Meguro-ku,
153-8902, Tokyo, Japan

Education

The University of Tokyo, Tokyo, Japan Apr 2017 – Apr 2019
Graduate School of Arts and Sciences
Multidisciplinary Sciences(Master)
Academic records: ***93%- A level, 7%- B level***

Core Courses: Network Optimization(A), Approximation and Online Algorithms with Applications(A), Environmental Management and Policy I(Economic models)(A), Environmental Measurement and Evaluation VI(Optimization Theory)(A)

SooChow University, SuZhou, China Sept 2012 – Jun 2016
School of Urban Rail Transportation
Architecture Environment&Equipment Engineering(Bachelor)
Academic GPA: ***3.70/4.0, Ranking 1/39***

Core Courses: C Language Programming(96/100), Probability&Statistics(92/100), Linear Algebra(89/100), Computer Software Technology Fundamentals(89/100), Calculus I(85/100), Calculus II(83/100), Elementary Application of Computer(90/100)

Research Experiences

Performance Evaluation of Matching Algorithms in Dynamic Markets with Arrivals and Departures.
Research Assistant | National Institute of Informatics, Tokyo, Japan
Supervisor: Naonori Kakimura (A.P.) Sept 2017 – Mar 2019

- Designed a simulated matching market circumstance (agent-based modeling) where people can make a choice according to different market mechanisms.
- Proposed new models, and evaluated performances of different algorithms in this project.
- Theoretically proved the problem is a (one or higher order) Markov Chain problem; Developed theories to reveal how to choose algorithms in different market circumstances.

Data-Driven Surrogate Model on Computational Numerical Simulations
Research Assistant | National Institute of Informatics, Tokyo, Japan
Supervisor: Naonori Kakimura (A.P.) Jun 2016 – July 2017

- Investigated a novel (learning theory-based), fast and effective method of predicting numerical simulation results (e.g., indoor air condition, traffic flow condition).
- Conducted different numerical experiments using different methods (e.g., FVM, FEM).
- I collected all data, and designed new learning algorithms to generate the simulation data of new settings from the old datasets.

Computational Simulation and its Application into the Architectural Ventilation System
Research Assistant | Chinese Undergraduate Research Endowment (CURE)
Supervisor: Shijie Cao (A.P.) and Xueliang Fan (A.P.) Jun 2014 – Jun 2016

- Designed the grid of a 3D model of a test environment, conducted numerical simulations, discovered the ventilation rules of a closed cavity.
- By analyzing the data, I transformed the ventilation efficiency and inlet-flow velocity into an optimization problem. Two academic paper was published from our results, and I was the second author.

Publication

1, Cao, Shijie, **Donghao Zhu**, and Xueliang Fan. "Evaluation of the Influence of Transitional Slot Reynolds Numbers on Ventilation Efficiency in Mechanically Ventilated Enclosures." *Procedia Engineering* 121(2015): 635-644

2, Cao, Shijie, **Donghao Zhu**, and Yinbao Yang. "Associated relationship between ventilation rates and indoor air quality." *RSC Advances* 6.112(2016): 111427-111435

Employments

National Institute of Informatics, Tokyo, Japan Apr 2017 – Mar 2019
Theory and Optimization in Network Group | Research Assistant

Global Office in the University of Tokyo, Japan Oct 2017 – Oct 2018
Poster Design Group | Global Office Student Tutor

Panasonic Corporation, Suzhou, China Sept 2015 – Nov 2015
Suzhou Research & Development Center | Research Internship

Awards

- Chun-Tsung Scholar by Hui-Chun Chin and Tsung-Dao Lee Chinese Undergraduate Research Endowment (Sponsored by Nobel Prize Winner T.D. Lee), 30/200. (2015)
- China National Scholarship, 5/1000 for top 1 student of major. (2012)

Skills & Abilities

- **Programming Language**: C, Matlab, Python, SQL
- **Syetems**: Windows, IOS, Linux
- **OR Software**: Gurobi
- **CFD Software**: ANSYS Fluent, Gambit, CFD-GEOM, CFD-ACE+, CFD-VIEW
- **Other Professional Skills/Tools**: CAD, LaTeX, Microsoft office
- **Languages**: Chinese(native), English(TOEFL 95, GRE 312+3.0), Japanese(passed N2)