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CHIA-HAO CHANG

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🌐 <https://chia-hao-chang.github.io>

EDUCATION

The University of Texas at Austin (UT Austin)	Austin, TX	Aug 2018 – present
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- **M.S. in Decision, Info. and Commun. Engr. (DICE), Electrical and Computer Engineering (ECE)** **GPA: 4.0/4.0**
- **Advisor:** Prof. John Hasenbein and Prof. Thomas Wiseman
- **Graduate Coursework:** Probability and Stochastic Processes, Large Scale Optimization, Linear Programming, Analysis and Design of Communication Networks, Game Theory, Queueing Theory, Theory of Probability

National Taiwan University (NTU)	Taipei, Taiwan	Sept 2013 – Jan 2018
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- **B.S. in Electrical Engineering (EE) with minor in Physics (Phys)** **GPA: 4.15/4.30**
- **NTU Presidential Award for 3 semesters:** Awarded to students ranked within the top 5% in each semester.
- **Relevant Courses:** Mathematical Analysis (I), Probability and Statistics, Calculus (I) and (II), Discrete Mathematics, Linear Algebra, Differential Equation, Signals and Systems, Principle of Communications

RESEARCH INTEREST

Stochastic Processes

- Stochastic Modeling and Stochastic Systems
- Stochastic Optimal Control

Mathematical Economics

- **Dynamic Game Theory:** Strategic Experimentation, Learning and Information Aggregation in Games
- **Decision Theory:** Decision Theory, Choice Theory, Subjective Probability

RESEARCH EXPERIENCE

Game Theory	with Prof. Thomas Wiseman	June 2019 – present
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- Dynamic game model for staged financing.
- Investigate the effects of signal structure on the associated perfect Bayesian equilibria.

Strategic Queues	with Prof. John Hasenbein	Jan 2019 – present
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- Game-theoretic queueing models for kidney transplantation.
- Analyze the parameter sensitivity in a novel way- approximate the originally complex MDP and perform analysis on each approximated MDP; show the approximated MDPs converge to the original MDP.
- Presented at *INFORMS Annual Conference 2019*.

Wireless Communication	with Prof. Jean-Fu Kiang	Feb 2017 – Jan 2018
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- Developed a novel transmission scheme of a cognitive wireless-powered communication network.
- Proposed a subproblem that efficiently solved the originally non-convex optimization problem and proved the relation between two problems.

Electromagnetics and Fluid Mechanics	with Prof. Jean-Fu Kiang	Sept 2015 – Jan 2017
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- Implemented MATLAB programs to solve Navier-Stokes Equations and simulated the hypersonic regime of aerodynamics.

PUBLICATION

- Chia-Hao Chang and John Hasenbein: Effects of patients' heterogeneity on patients' choice in a first-come-first-serve kidney transplant system, *in preparation*.

TALKS

INFORMS Annual Conference 2019	Seattle, WA	Oct 2019
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- Session: WB11 - Queueing Approximations and Strategic Queues.

HONORS

High School Physics Contest Winner <ul style="list-style-type: none">First prize and representative of Kaohsiung City.	Kaohsiung, Taiwan	Oct 2012
Selection Test for International Physics Olympiad <ul style="list-style-type: none">Second round	Taiwan	Nov 2012

TEACHING EXPERIENCE

Teaching Assistant <ul style="list-style-type: none">Volunteered-Service Learning Class	NTU	Sept 2016 – Jan 2017
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EMPLOYMENT

Mandatory Military Service <ul style="list-style-type: none">Private, Taiwan Army.	Tainan, Taiwan	Feb 2018 – June 2018
Private Tutoring <ul style="list-style-type: none">High school physics and mathematics.	Taipei, Taiwan	Sept 2014 – Jan 2018

LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

Attendee <ul style="list-style-type: none">Student attendee of Texas Wireless Summit held at UT Austin (Topic of the summit: AI and the Mobile Device).	Texas Wireless Summit	Nov 2018
Club Leader <ul style="list-style-type: none">Leader of a seventy-four person voluntary club.	NTU Kind-kids Club	Feb 2016 – June 2016
Club Member <ul style="list-style-type: none">Weekly volunteered curricular service at Bethany Orphanage, Taipei, Taiwan.	NTU Kind-Kidds Club	Sept 2013 – June 2017
Camp Activity Organizer <ul style="list-style-type: none">Held a summer camp dedicated for high school students to get to know electrical engineering.	NTUEE Summer Camp	July 2014

TECHNICAL SKILLS

Programming Languages <ul style="list-style-type: none">MATLAB, Python, \LaTeX
Spoken Languages <ul style="list-style-type: none">Chinese(native), Taiwanese(native), English(fluent)