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# CHIA-HAO CHANG

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🌐 <https://chia-hao-chang.github.io>

## EDUCATION

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<b>The University of Texas at Austin (UT Austin)</b>	<b>Austin, TX</b>	<b>Aug 2018 – present</b>
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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(ongoing), Theory of Probability(ongoing)

<b>National Taiwan University (NTU)</b>	<b>Taipei, Taiwan</b>	<b>Sept 2013 – Jan 2018</b>
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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

### Applied Probability

- Stochastic Modeling
- Decision Making Under Uncertainty: Stochastic Control and Markov Decision Process

### Game Theory

- Strategic Experimentation
- Learning and Information Aggregation in Games

## RESEARCH EXPERIENCE

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

<b>Strategic Queues</b>	<b>with Prof. John Hasenbein</b>	<b>Jan 2019 – present</b>
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- Game-theoretic queueing models for kidney transplantation

<b>Wireless Communication</b>	<b>with Prof. Jean-Fu Kiang</b>	<b>Feb 2017 – Jan 2018</b>
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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.

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

## HONORS

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<b>High School Physics Contest</b>	<b>Kaohsiung, Taiwan</b>	<b>Oct 2012</b>
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### Winner

- First prize and representative of Kaohsiung City.

<b>Selection Test for International Physics Olympiad</b>	<b>Taiwan</b>	<b>Nov 2012</b>
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- Second round

## TEACHING EXPERIENCE

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

## EMPLOYMENT

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<b>Mandatory Military Service</b>	<b>Tainan, Taiwan</b>	<b>Feb 2018 – June 2018</b>
<ul style="list-style-type: none"> <li>Private, Taiwan Army.</li> </ul>		

<b>Private Tutoring</b>	<b>Taipei, Taiwan</b>	<b>Sept 2014 – Jan 2018</b>
<ul style="list-style-type: none"> <li>High school physics and mathematics.</li> </ul>		

## LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

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<b>Attendee</b>	<b>Texas Wireless Summit</b>	<b>Nov 2018</b>
<ul style="list-style-type: none"> <li>Student attendee of Texas Wireless Summit held at UT Austin (Topic of the summit: AI and the Mobile Device).</li> </ul>		

<b>Club Leader</b>	<b>NTU Kind-kids Club</b>	<b>Feb 2016 – June 2016</b>
<ul style="list-style-type: none"> <li>Leader of a seventy-four person voluntary club.</li> </ul>		

<b>Club Member</b>	<b>NTU Kind-Kidds Club</b>	<b>Sept 2013 – June 2017</b>
<ul style="list-style-type: none"> <li>Weekly volunteered curricular service at Bethany Orphanage, Taipei, Taiwan.</li> </ul>		

<b>Camp Activity Organizer</b>	<b>NTUEE Summer Camp</b>	<b>July 2014</b>
<ul style="list-style-type: none"> <li>Held a summer camp dedicated for high school students to get to know electrical engineering.</li> </ul>		

## TECHNICAL SKILLS

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### Programming Languages

- MATLAB, Python,  $\text{\LaTeX}$

### Spoken Languages

- Chinese(native), Taiwanese(native), English(fluent)