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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
- **Graduate Coursework:** Probability and Stochastic Processes, Large Scale Optimization, Linear Programming, Analysis and Design of Communication Networks, Game Theory

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<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: 4.16/4.30**
- **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

- Mechanism Design
- Strategic Decision Making

## RESEARCH EXPERIENCE

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<b>Queueing Theory</b>	<b>with Prof. John Hasenbein</b>	<b>Jan 2019 – present</b>
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- Game-theoretic queueing models for liver transplantation

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<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.

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<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.

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<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>
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- Volunteered-Service Learning Class

## EMPLOYMENT

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

## LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

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<b>Attendee</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>Texas Wireless Summit</b>	<b>Nov 2018</b>
<b>Club Leader</b> <ul style="list-style-type: none"><li>• Leader of a seventy-four person voluntary club.</li></ul>	<b>NTU Kind-kids Club</b>	<b>Feb 2016 – June 2016</b>
<b>Club Member</b> <ul style="list-style-type: none"><li>• Weekly volunteered curricular service at Bethany Orphanage, Taipei, Taiwan.</li></ul>	<b>NTU Kind-Kidds Club</b>	<b>Sept 2013 – June 2017</b>
<b>Camp Activity Organizer</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>	<b>NTUEE Summer Camp</b>	<b>July 2014</b>

## TECHNICAL SKILLS

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### Programming Languages

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

### Spoken Languages

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