Tong-Nong Lin

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# EDUCATION

## National Taiwan University (NTU) Taipei, Taiwan

*Bachelor of Science in Electrical Engineering (EE) and Mathematics (Double Major)* Sep. 2012 - Jun. 2017

* Cumulative GPA: 3.75/4.3

## National Taiwan University (NTU) Taipei, Taiwan

*Master of Science in Electrical Engineering and Computer Science* Sep. 2017 - Jun. 2019

* Cumulative GPA: 3.96/4.3

# RESEARCH & TEACHING EXPERIENCE

## NTU – Collective Algorithm Lab Taipei, Taiwan

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| *Master degree* | Sep. 2017 - Jun. 2019 |

Advisor: Professor Ho-Lin Chen

Research on Game Theory

* Thesis : Generalized form of risk aversion under uncertainty
  + Propose generalized formulas to represent player’s risk aversion under uncertainty.
  + Proved upper and lower bounds on the price of anarchy when players’ risk aversion satisfies certain constraints.
  + Showed these bounds are tight or nearly­ tight for many previously studied risk aversions.

## Academia Sinica – Information Science Taipei, Taiwan

*Research Assistant* Mar. 2023 - Present

Advisor: Professor Meng-Tsung Tsai

Research on Streaming Algorithm on graph problems

* Designed a deterministic algorithm to find an independent set that meets Turan’s Bound
* Leverage skills of probabilistic method and de-randomization to design the deterministic algorithm

## NTU-Electrical Engineering Taipei, Taiwan

## *Teaching Assistant*

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| The Design and Analysis of Algorithms | Sep. 2017 - Jan. 2018 |

* Responsible for grading assignments, midterm and final exams for approximately 150 students

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| Discrete Mathematics | Feb. 2018 - Jun. 2018 |

* Responsible for grading assignments, midterm and final exams for approximately 120 students

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| Discrete Mathematics | Sep. 2018 - Jan. 2019 |

* Responsible for grading assignments, midterm and final exams for approximately 120 students

# PROJECT EXPERIENCE

**Embedded Systems Lab** Feb. 2016 - Jun. 2016

* Developed a communication system that can transmit audio signal and text between Arduino 101 orientation control car and user.

**Fast Crypto Lab** Sep. 2014 - Dec. 2015

* Conducting research on side channel attacks and implementing corresponding methodologies.

# WORK EXPERIENCE

## Mediatek (MTK) Hsinchu, Taiwan

*Software Engineer* Sep. 2019 - Mar. 2023

* Independently responsible for designing and developing AES256-GCM mode cryptographic algorithm into the communication chip's software scheme
* Design authentication protocols and encryption/decryption procedures in bootup mode without using RAM
* Enhance authentication protocols between the phone and the server in SIM-lock feature
* Implement certificate framework to support ASN.1 DER format

# AWARDS & HONORS

* Dean’s List Award (Top 5% of class) Spring 2013
* National Team Bronze Medal, TRML Taiwan High school Math Competition August 2012
* 3 times vAward, Mediatek December 2019, December 2020, December 2022

# RELATED SKILLS

* TOEFL score: 100/120 (R:26/30, L:27/30, S:23/30, W:24/30)
* Programming Language: C/C++, MATLAB, Verilog, Python

# EXTRACURRICULAR ACTIVITIES

* Volunteer service in Taiwan Fund for Children and Families Feb. 2014 - Jun. 2014
  + After-school tutoring for underprivileged children
* Bridge Club Feb. 2019 - Jun. 2019
  + Attend Bridge competition hosted by National Chengchi University July. 2019
* Participated in 5km school marathon held in National Taiwan University
  + Attend 5km school marathon Mar. 2012, Mar. 2022, Mar. 2023

# HOBBIES

* cook, play badminton, play table tennis, hiking