

# Ta-Yang Wang

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## EDUCATION

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**PhD in Computer Science**, University of Southern California, CA 08/2019 - Expected completion 2024

- GPA: 3.86/4.0

**Bachelor of Science in Mathematics**, National Taiwan University, Taipei, Taiwan 09/2014 - 06/2018

- Overall GPA: 3.96/4.3
- Major GPA: 3.88/4.3
- Rank: 2nd/55

## ACADEMIC EXPERIENCE

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**Teaching Assistant** Fall 2019, Spring/Fall 2020, Spring/Fall 2021, Fall 2022, Spring/Summer 2023

Analysis of Algorithms, University of Southern California Instructor: Prof. Shahriar Shamsian

- Designed, posted and monitored the grading process of homework assignments.
- Generated and proctoring exams.
- Hold a 2-hour office hour to answer questions on the lecture or homework of the algorithm concept.

**Teaching Assistant** Spring 2018

Introduction to Cryptography, National Taiwan University Instructor: Prof. Jiun-Ming Chen

- Tutored students and assisted with assignments and concepts in Cryptography.

**Research Assistant** 09/2017 – 06/2018

National Taiwan Sport University & Feng Chia University Advisors: Prof. JyhHow Huang & Hwai-Jung Hsu

- Collected the data from players' spray charts which indicate the trajectories of their hitting balls.
- Determined a baseball statistic that summarizes a player's total contributions to their team in CPBL.
- Described the quality of a pitch using a single value based on quantifiable aspects of an individual baseball pitch.

## HONORS AND AWARDS

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- National Taiwan University Presidential Award (Awarded to the top 5%) 2014 - 2018
- 9<sup>th</sup> S.-T. Yau College Student Mathematics Contest, 2018  
Honorable Mention (Applied and Computational Mathematics)
- National Taiwan University Dean's Award of College of Science 2018

# PUBLICATIONS

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## Conferences

**T. Wang**, R. Kannan, and V. K. Prasanna, “Training Heterogeneous Graph Neural Networks using Bandit Sampling”. *The 32nd ACM International Conference on Information & Knowledge Management (CIKM)*, 2023.

S. Wijeratne, **T. Wang**, R. Kannan, and V. K. Prasanna, “Towards Programmable Memory Controller for Tensor Decomposition”. *The 32nd ACM/SIGDA International Symposium on Field-Programmable Gate Arrays (FPGA)*, 2022.

S. Wijeratne, **T. Wang**, R. Kannan, and V. K. Prasanna, “Towards Programmable Memory Controller for Tensor Decomposition”. *The 11th international conference on data science technology and applications (DATA)*, 2022.

**T. Wang**, W. Chang, A. Srivastava, R. Kannan, and V. K. Prasanna, “Monte Carlo Tree Search for Task Mapping onto Heterogeneous Platforms”. *The 28th IEEE International Conference on High Performance Computing, Data, and Analytics (HiPC)*, 2021.

**T. Wang**, A. Srivastava, and V. K. Prasanna, “A Framework for Task Mapping onto Heterogeneous Platforms”. *2020 IEEE High Performance Extreme Computing Conference (HPEC)*, 2020.

A. Srivastava, **T. Wang**, P. Zhang, C. D. Rose, R. Kannan, and V. K. Prasanna, “MemMAP: Compact and Generalizable Meta-LSTM Models for Memory Access Prediction”. *The 24th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, 2020.

## Journal

P. Zhang, A. Srivastava, **T. Wang**, C. A. De Rose, R. Kannan, and V. K. Prasanna. “C-MemMAP: Clustering-driven Compact, Adaptable, and Generalizable Meta-LSTM Models for Memory Access Prediction.” *International Journal of Data Science and Analytics (JDSA)*, 2021.

# WORK EXPERIENCE

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## Research Assistant

08/2018 – 07/2019

National Center for Theoretical Sciences (NCTS), Taipei, Taiwan

Advisor: Prof. Weichung Wang

- Built an artificial neural network for pancreatic tumor detections and classifications
- Applied diffusion learning theory in the medical field
- Used persistent homology to identify significant features of medical images

# PROJECT EXPERIENCE

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## Speech in the inaugural SABR Day at the Taiwan Chapter

- Presented an introduction to Sabermetrics (Quantitative analysis in baseball)
- Conducted a brief review and future prospect of Pitch Quantification

## Medical Image Analysis using Persistent Homology

- Performed pancreas tumor segmentation from Computed Tomography images
- Classified prostate histopathology images with different Gleason grades