

Education

- 2013–Present **Ph.D., Computer Science, New York University.**
- Advisor: Dr. Jinyang Li
- Research Topic: Distributed Systems, especially in Distributed Programming Frameworks.
- 2005–2007 **M.S., Computer Science, National Tsing Hua University.**
- Advisor: Dr. Jenq-Kuen Lee
- Thesis Topic: Microkernel Design and Dual-core Supports for PAC VLIW DSP Processors.
- 2001–2005 **B.S., Computer Science, National Tsing Hua University.**

Research Interests

Distributed computing, file system, embedded software and algorithm design.

Publications

- ATC'15 **Spartan: A Distributed Array Framework with Smart Tiling.**
Chien-Chin Huang, Qi Chen, Zhaoguo Wang, Russell Power, Jorge Ortiz, Jinyang Li, Zhen Xiao. *USENIX Annual Technical Conference*, July 2015
- TODAES **Garbage Collection for Multiversion Index in Flash-based Embedded Databases.**
Po-Chun Huang, Yuan-Hao Chang, Kam-Yiu Lam, Jian-Tao Wang, Chien-Chin Huang. *ACM Transactions on Design Automation of Electronic Systems*, June 2014
- JSPS **Enhancing Microkernel Performance on VLIW DSP Processors via Multiset Context Switch.**
Brian K. Hsieh, Yung-Chia Lin, Chien-Chin Huang, and Jenq Kuen Lee. *Journal of Signal Processing Systems*, Vol. 51.

Research Projects

- 2014-present **Spartan: Distributed Array Programming Framework.**
Spartan is a distributed array framework which provides several data-flow high-level operators to help users to implement distributed array programs. The 'key' for these operators is 'extent' which is a data structure representing the shape and location of the 'value', a 'tile' (sub-array). Spartan also contains more than 50 Numpy-like built-in APIs which implemented by the high-level operators.
- 2012-2013 **MVBT Flash: Multi-Version B-Tree Database for Flash Device.**
The project is to build a database based on multi-version b-tree on Flash devices. The major challenge of the idea is the out-place update property of Flash devices. Whenever a leaf has been updated, it will trigger all its ascendants to be updated and results in huge amount of outdated/invalid pages. A efficient garbage collection has been proposed to solve the issue.

Honors, Awards and Grants

- 2015 **ATC'15 Student Travel Grant.**
- 2014 **OSDI'14 Student Travel Grant.**
- 2007 **1st Place, Best Thesis Award**, Institute of Information Computing Machinery, Taiwan.
- 2006 **1st Place, Embedded System Design Contest**, Ministry of Education, Taiwan.
- 2006 **Selective Preference, SiliconAward**, Embedded Software Group, MXIC Inc..
- 2004 **7th Place, ACM International Collegiate Programming Contest (ICPC)**, Kaohsiung Station.

Professional Experience

- 2015 **Summer Research Intern, IBM T.J. Watson Center**, Yorktown Heights, NY, USA.
- 2013–Present **Research Assistant, New York University**, New York, NY, USA.
- 2012–2013 **Research Assistant, Institute of Information Science, Academia Sinica**, Taipei, Taiwan.
- 2008–2012 **Senior Software Engineer, MediaTek Inc.**, Hsinchu, Taiwan.
- 2005–2007 **Graduate Research Assistant, National Tsing Hua University**, Hsinchu, Taiwan.