CHING-YI LIN

(412)225-7345
chingyil@andrew.cmu.edu

EDUCATION

Ph.D. Candidate in Electrical Computer Engineering *August 2018 - Present*
Carnegie Mellon University, Pittsburgh
Advisor: Marc Dandin
Expecting graduation on September 2024
Prospectus exam passed on January 2023
Qualifying exam passed on May 2021
GPA: 3.58/4.0 (until Spring 2023)

M.S. in Electrical Computer Engineering *August 2018 - December 2022*
Carnegie Mellon University, Pittsburgh
GPA: 3.58/4.0

B.S. in Electrical Engineering *August 2013 - June 2017*
National Tsing Hua University (NTHU), Hsinchu, Taiwan
Class Representative
GPA: 3.82/4.3 (Overall) 4.02/4.3 (Major)

BOOK AND BOOK CHAPTERS

Ching-Yi Lin, Md Sakibur Sajal, Yann Gilpin, Fahimeh Dehghandehnavi, Anna Batueva, Kai-Chun Lin, Nicole McFarlane, and Marc Dandin. "CMOS bioelectronics: Current and future trends." Bioelectronics (2022): 93-107.

PUBLICATION

Kyle Smith, **Ching-Yi Lin**, Yann Gilpin, Elizabeth Wayne, and Marc Dandin. "Measuring and modeling macrophage proliferation in a lab-on-CMOS capacitance sensing microsystem." Frontiers in Bioengineering and Biotechnology 11 (2023): 1159004.

Yuwei Qin, Ruben Purdy, Alec Probst, **Ching-Yi Lin**, and Jian-Gang Zhu. "Non-Linear CNN-Based Read Channel for Hard Disk Drive With 30% Error Rate Reduction and Sequential 200-Mbits/s Throughput in 28-nm CMOS." IEEE Journal of Solid-State Circuits 58, no. 4 (2023): 1094-1105.

Yann Gilpin, **Ching-Yi Lin**, Mats Forssell, Siyang Zheng, Pulkit Grover, and Marc Dandin. "Tracking the effects of tumor treating fields on human breast cancer cells in vitro using a capacitance sensing lab-on-CMOS microsystem." In 2022 29th IEEE International Conference on Electronics, Circuits and Systems (ICECS), pp. 1-4. IEEE, 2022.

Yuwei Qin, Ruben Purdy, Alec Probst, **Ching-Yi Lin**, and Jian-Gang Zhu. "ASIC Implementation of Nonlinear CNN-Based Data Detector for TDMR System in 28 nm CMOS at 200 Mbits/s Throughput." IEEE Transactions on Magnetics 59, no. 3 (2022): 1-8.

Yuwei Qin, Ruben Purdy, Alec Probst, **Ching-Yi Lin**, and Jian-Gang Jimmy Zhu. "Non-linear CNN-based read channel for hard disk drive with 30% error rate reduction and sequential 200Mbits/second

throughput in 28nm CMOS." In 2022 IEEE Symposium on VLSI Technology and Circuits (VLSI Technology and Circuits), pp. 206-207. IEEE, 2022.

Ching-Yi Lin, and Radu Marculescu. "Model personalization for human activity recognition." In 2020 IEEE international conference on pervasive computing and communications workshops (PerCom Workshops), pp. 1-7. IEEE, 2020.

Kartikeya Bhardwaj, **Ching-Yi Lin**, Anderson Sartor, and Radu Marculescu. "Memory-and communication-aware model compression for distributed deep learning inference on IoT." ACM Transactions on Embedded Computing Systems (TECS) 18, no. 5s (2019): 1-22.

PATENTS

Marc Dandin, and **Ching-Yi Lin**. "System and Method to Measure CAR-T cell quality," U.S. Patent #0366873, November 2023

ACADEMIC EXPERIENCE

- TA in *Analog Integrated Circuit Design* — *Fall 2023*
- TA in *Intro to ML for Engineers* — *Spring 2022*
- TA in *Embedded System Lab* — *Spring 2018*
- TA in *Advanced Computer Architecture* — *Fall 2017*
- TA in *Embedded System Lab* — *Spring 2017*
- TA in *Introduction of C Programming* — *Fall 2016*

WORK EXPERIENCE

Digital Circuit Design Intern — *Summer 2021*
Apple

- Customized SRAM cell design and evaluation in schematic-level
- Transmission line modeling and optimization

Industrial Technology Research Institute of Taiwan (ITRI) — *Summer 2016*
Software Engineer

- Information and communications research laboratories
- Installed Android 5.1 on Odroid-C2, a 64-bit quad-core SBC
- Ported Secure Virtual Mobile Platform (SVMP) on Android 5.1

COMPETITION

IEEE SPCUP — *March 2017*
Hardware Designer

- *Excellent video and entertaining concept* Award
- Implemented the signal processing algorithm into embedded system
- Responsible for system design (Raspberry + Arduino), task parallelization, and protocol design.

Eurobot 2016 — *June 2016*
Software Team Leader

- An international robotic competition over the world.

· DIT Robotics, including 9 mechanical engineering students, 1 physic student and 1 EE student.
· Responsible for embedded system design and protocol design.

EXTRA CURRICULAR

Taiwanese Scholar Society *2019-2022*

· President in 2019-2020
· Vice president in 2020-2021
· Vice president in 2021-2022

NTHU Men's Tennis Team *2015-2016*

NTHU EE Tennis Team *2013-2018*

· Team Leader in 2014-2015
· Team Officer in 2015-2018
· 2017 Crazy Bamboo Cup 1st place
· 2017 ELE Cup 4th place
· 2018 ELE Cup 4th place