

Cheng-Hsiang Chiu

<https://cheng-hsiang-chiu.github.io/>

Email : cheng-hsiang.chiu@utah.edu

Mobile : +1-657-348-3118

EDUCATION

- **University of Utah** Salt Lake City, USA
Ph.D. in Electrical and Computer Engineering Aug. 2020 – Present
- **École Polytechnique Fédérale de Lausanne** Lausanne, Switzerland
Master of Science in Computer Science Sep. 2013 – Feb. 2016
- **National Chiao Tung University** Hsinchu, Taiwan
Master of Science in Communication Engineering Sep. 2005 – Aug. 2007
- **National Chung Cheng University** Chiayi, Taiwan
Bachelor of Science in Electrical Engineering Sep. 2001 – Jun. 2005

ONGOING PROJECTS

- **Pipeline/Taskflow**: Developing a lock-free pipeline algorithm on top of Taskflow.
- **syclFlow**: Leveraging a task graph algorithm of CUDA graph into a SYCL runtime.
- **High Performance Computing**: Working on GPU and parallel programming for certain functions in Taskflow.

PAST PROJECTS

- **VLSI Floor Planner**: A floor planner mapping a 3-D finite element model onto a 2-D wafer scale supercomputer.
- **Privacy Protection**: Technique to prevent malicious Apps from profiling consumers' privacy.
- **Recommender System**: Technique to alleviate the cold start problem by the help of Amazon Mechanical Turk.

EXPERIENCE

- **Cadence** Texas, USA
Software Intern May 2021 - Aug. 2021
 - **Buffer Insertion Acceleration**: Accelerated the executions of buffer insertion algorithm by 16%.
- **UiT** Tromsø, Norway
Doctoral Researcher Feb. 2019 - Dec. 2019
 - **Edge computing**: Implemented an energy efficient framework to classify Arctic wild animals in-situ.
 - **Power data**: Performed data cleansing and developed visualization framework of power data in Tromsø, Norway.
- **University of Khalifa** Abu Dhabi, UAE
Assistance Researcher Jan. 2018 - Nov. 2018
 - **Graphene**: Automated python-meep for materials modeling and designed data visualization frameworks for it.
 - **Sand classification**: Developed classification techniques to obtain the components of sands in Nigeria.
- **CERN** Geneva, Switzerland
Software Developer Mar. 2015 - Aug. 2015
 - **Consistency checking**: Developed a kernel package to discover devices on the network, perform consistency checking with the installation databases, and monitor the status of the data acquisition network.
- **National Chiao Tung University** Hsinchu, Taiwan
Research Assistant Jan. 2009 - Jun. 2013
 - **Intelligent environment**: Coordinated and built vision-based surveillance system in a campus and streamed the video over the self-designed platform.

PUBLICATIONS

Conference papers include 1 in parallel computing, 4 in networking, and 2 in computer vision.

SKILLS

- **Operating System**: Linux
- **Language**: C, C++, Python, Javascript, HTML, SQL
- **Unit Test**: doctest
- **Profiler**: gprof, perf