

# Yi-En Chou

Hsinchu, Taiwan ROC

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## Education

### National Tsing Hua University

Hsinchu, Taiwan ROC

M.S. in Power Mechanical Engineering

JUL 2021 - AUG 2023(expected)

- GPA 3.99/4.3
- Computational Fluid Dynamics Lab
- **Courses** Algorithm | Software Project Management | Computational fluid dynamics
- **Thesis topic** A deep learning model for reducing computational cost of projection algorithm. Propose a model with physics constraints to make guess of pressure field of a fluid domain to reduce iterative process.

### National Tsing Hua University

Hsinchu, Taiwan ROC

B.S. in Power Mechanical Engineering focused on Fluid Dynamics

Sep 2017-Jun 2021

- GPA 3.42/4.3
- **Courses** (Programming) Data Structures | Programming Design | (Control) Control System I | Control System II | System Dynamics Analysis | (Optimization) Numerical Analysis | Introduction to Artificial Intelligence | (Mechanics) Computer Aided Machine Design and Drawing | Kinematics of Machinery | Mechanical Vibrations | Applied Mechanics | Mechanics of Materials | (Miscellaneous) Work Shop Practices | Manufacturing Processes | Flight Mechanics | Gas Phase Dynamics | Advanced Fluid Dynamics | Electronics
- **Project** Automatic Measurement Instrument for Macro and Micro-scale Stresses. First Prize award in National Applied Research Laboratories Instrument Technology Innovation Competition.

## Experience

### Sciwork

Hsinchu, Taiwan ROC

Open source contributor

Jun 2022-Present

- Keep blog to retain knowledge and self teach. <https://en-chou.github.io/>
- Collaborator of Solvcon, works include editing latex numerical note, adding tex linter along with CI executions to project and more.
- Teamed with 5 other contributors in holding 2 monthly off-line events and attended 4 monthly off-line event for discussion on computer code for scientific, numerical, and engineering work, which has around 20 participants per event.
- Presented in an unconference in CONCOM(CONference for open COMMunities) 2022 x OCF to audience of 50+ open-source contributors.
- **Technical Skills** Linux CLI | Makefile | CI executions
- **Soft Skills** Communication | Presentation | Collaboration | Troubleshooting | Lifelong learning

### National Tsing Hua University Department of Power Mechanical Engineering

Hsinchu, Taiwan ROC

Teaching assistance

Feb 2022-Present

- Computational Fluid Dynamics. Gave TA courses, aided with students' problems, and marked for programming submissions and examinations.
- Thermal and Fluid Science II. Held topic discussion, aided in preparing course material, kept track of the course status and mark for examination.
- **Soft Skills** Communication | Presentation | Multi-tasking

### National Tsing Hua University Computational Fluid Dynamics Lab

Hsinchu, Taiwan ROC

Server maintenance

Jul 2021-Present

- Setup environment of server operated on Linux for computation purpose, and reach for further assistance when trouble is beyond our reach.
- **Technical skills:** Linux CLI
- **Soft Skills:** Communication, troubleshooting.

### Keyarrow INC.

Taichung, Taiwan ROC

Computer Aided Design Intern

Jul 2018-Aug 2018

- Computer Aided Design with Pro-E on sheet metal.
- **Technical Skills:** CAD with Pro-E
- **Soft Skills:** Communication, Real world experience.

## University Projects/ Course works

### Automatic Measurement Instrument for Macro and Micro-scale Stresses

Hsinchu, Taiwan ROC

National Tsing Hua University Photomechanics Lab

Feb 2020-Dec 2021

- Enabled automatic measurement on Macro and Micro-scale Stresses and developed modular design for the experiment setup, 80% reduction in total measuring time.
- Wrote code for automating measurement and building user interface via LabView and mechanical design utilizing Inventor.
- Won First Prize award in National Applied Research Laboratories Instrument Technology Innovation Competition among 10+ teams in final round.
- **Technical Skills** Labview | Inventor
- **Soft Skills** Presentation | Collaboration

## Course works

Hsinchu, Taiwan ROC

National Tsing Hua University | National Yang Ming Chiao Tung University

- Mechanical-simulation related works: <https://en-chou.github.io/2023/02/05/2023-02-05-CAD/>
- (Computational Fluid Dynamics) A numerical code in C++: [https://github.com/EN-Chou/Projection\\_algorithm](https://github.com/EN-Chou/Projection_algorithm)
- (Computational Fluid Dynamics) A numerical code in C++ using Message Passing Interface(MPI): [https://github.com/EN-Chou/Heat\\_Convection\\_and\\_diffusion-MPI](https://github.com/EN-Chou/Heat_Convection_and_diffusion-MPI)
- (Algorithms) A divide and conquer code in C++: <https://github.com/EN-Chou/algo>

## Skills

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**Programming** (Experienced) C++ | Matlab | Python

**Miscellaneous** Linux | Shell (Bash) | LaTeX | Git and github | LabView | Autodesk Inventor | Pro-E | Ansys-Fluent | Adams | Tecplot | MPI

**Language** Mandarin(Native) | English(TOEFL 105) | Japanese(N5)

## Interests

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**Basketball** I engage in the department women basketball team for 6 years, we share experience, tactics, sweats and laughs.

**Surfing** Surfing came to my life since my working-holiday in a surf shop 2019, bringing both mental and physical health.

**Technical Writing** I write blogs to record what I have learned and do some web-page design in <https://en-chou.github.io/>.

**Photography** I enjoy technology and beauty in life, photography nurtures my soul.