

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. Won Gold Prize award in 2021 TSPE Research Project and Paper 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 | Create BOM table
- **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. Won Gold Prize award in 2021 TSPE Research Project and Paper Competition.
- **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
- (Computational Fluid Dynamics) A numerical code in C++ using Message Passing Interface(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

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

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.