

# PO-CHING HSU

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## SUMMARY

Innovative and Motivated Mechanical/Thermal Engineer with 7+ years of experience in HVAC, AI-driven Modeling, Electronic and Data Center Server Cooling. Expert in Thermal Management, CFD Simulation, and Experimental Testing. Former Thermal Engineer at Foxconn, a leading global technology manufacturer, driving large-scale server cooling solutions. Passionate about leveraging AI for Smart HVAC Design and Control.

## EDUCATION

University of Maryland, College Park (UMD)	8/2021 - 3/2026 (Expected)
<i>Ph.D. in Mechanical Engineering</i>   GPA: 3.9/4.0	Maryland, USA
National Taiwan University (NTU)	9/2015 - 6/2017
<i>M.S. in Mechanical Engineering</i>	Taipei City, Taiwan
National Taipei University of Technology (NTUT)	9/2011 - 6/2015
<i>B.S. in Energy and Refrigerating Air-Conditioning Engineering</i>	Taipei City, Taiwan

## WORK EXPERIENCE

Foxconn Technology Group - Fii	11/2017 - 3/2021
<i>Thermal Engineer</i>	New Taipei City, Taiwan
<ul style="list-style-type: none"><li>Developed thermal solutions for AI accelerator cards, projected for 1 million annual sales</li><li>Developed high-performance server cooling solutions, enhancing thermal management in data centers</li><li>Optimized thermal designs with CFD simulations and DoE methods, cutting manufacturing costs by 10%</li><li>Conducted prototype testing and resolved thermal issues, improving components thermal margins by 5°C</li></ul>	

## RESEARCH EXPERIENCE

Center for Environmental Energy Engineering (CEEE) - EEHP, UMD	8/2021 - Present
<i>Graduate Research Assistant</i>	Maryland, USA
<ul style="list-style-type: none"><li>Performed field tests on VRF system and developed machine learning models reducing the error by 22%</li><li>Developed heat exchanger models and HVAC system simulations using in-house software integrated with AI-driven modeling techniques</li><li>Performed oil retention, VCC, and heat exchangers test for low GWP refrigerant</li></ul>	

Energy and Environment Lab, NTU	9/2015 - 6/2017
<i>Graduate Research Assistant</i>	Taipei City, Taiwan
<ul style="list-style-type: none"><li>Developed a piezoelectric air-breathing pump for a PEM fuel cell stack, increasing power flux by 20%, reducing volume by 68%, and weight by 76%</li><li>Applied CFD simulations and experimental methods to optimize air-breathing pump airflow and enhance the performance of fuel cell stacks</li></ul>	

Two Phase Flow and Heat Transfer Enhancement Lab, NTUT	2/2014 - 1/2015
<i>Undergraduate Graduate Researcher</i>	Taipei City, Taiwan
<ul style="list-style-type: none"><li>Developed and tested an impinging microchannel heatsink using two-phase dielectric fluid (FC-72) for efficient chip cooling, including CFD simulations to analyze flow fields of various jet orifice dimensions</li></ul>	

## PUBLICATIONS

- Hsu, P.-C., Gao, L., Hwang, Y. (2025). Comparative study of LSTM and ANN models for power consumption prediction of variable refrigerant flow (VRF) systems in buildings. *International Journal of Refrigeration*, 169, 55–68. <https://doi.org/10.1016/j.ijrefrig.2024.10.020>
- Ma, H., Hsu, Y., Hsu, P. (2017). A Novel Hybrid Actuator Driven Magnetically in the Bi-Cell PEM Fuel Cell Stack. *Metals*, 7(11), 453. <https://doi.org/10.3390/met7110453>

## SKILLS

- Programming & Machine Learning:** Python, MATLAB, EES, C, PyTorch, TensorFlow, Keras, Sklearn
- Software:** SOLIDWORKS, LabVIEW, EnergyPlus, CoilDesigner, VapCyc, Flotherm, Ansys Icepak/Fluent