Jie Huang

Personal Data

Gender:	Male
Nationality:	Chinese
Address:	Kide 2501, Department of Applied Physics, Aalto University, Finland
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Education

05/2023–now	Doctoral Researcher in **Applied Physics** Aalto University, Helsinki, Finland, Advisor: Prof. Adam S. Foster
09/2018–06/2021	M.S. in **Condensed Matter Physics** Wenzhou University, Wenzhou, China, Advisor: Prof. Shiben Li Thesis: "Applications of machine learning in hydrogen-bond dynamics in bulk water and polymer chains' structure factor" **GPA: 3.84/4.0**
09/2012–06/2016	B.S. in **Electronic Information Engineering**, China West Normal University, Nanchong, China Thesis: "A CCD translation device based on Raspberry Pi" **GPA: 3.22/4.0**

Scientific Publications

1. Gang Huang and **Jie Huang***, Revisiting the Thickness of the Air-Water Interface from Two Extremes of Interface Hydrogen Bond Dynamics, **Journal of Chemical Theory and Computation**, DOI: 10.1021/acs.jctc.4c00457, **2024**

2. **Jie Huang**, Bowen Wang, Hejin Yan and Yongqing Cai*, Mechanism of interaction of water above the methylammonium lead iodide perovskite nanocluster: size effect and water-induced defective states, **The Journal of Physical Chemistry Letters**, DOI: 10.1021/acs.jpclett.3c02807, **2024**

3. **Jie Huang**, Gang Huang*, and Shiben Li*, A machine learning model to classify dynamic processes in liquid water, **ChemPhysChem**, DOI: 10.1002/cphc.202100599, **2022**, **Cover Article**

4. **Jie Huang**, Shiben Li*, Xinghua Zhang*, and Gang Huang, Neural network model for structure factor of polymer systems, **The Journal of Chemical Physics**, DOI: 10.1063/5.0022464, **2020**

Work Experience

07/2022 - 04/2023	Research Assistant, Institute of Applied Physics and Materials Engineering, **University of Macau**, Macau, China. Advisor: Prof. Yongqing Cai 1. Density Functional Theory Study of Perovskite Nanoclusters in Aqueous Environment
09/2016 - 04/2018	**Software Engineer**, FalconPro Technology Co., Ltd, Shanghai, China 1. **Image processing & Barcode decoding** 2. **Embedded systems** programming

Awards

2024	**Third Place** in AI and ML for Microscopy, Hackathon
2021	**Outstanding Graduate** of Wenzhou University
2021	Award for **Excellent Scientific and Technological Innovation**
2020	**National Scholarship**, Ministry of Education of China
2020	**First-grade Scholarship** for scientific research, Wenzhou University
2015	**National Undergraduate Electronic Design Contest (TI Cup) Second Prize**
2015	**National Professional Software Engineering Design Contest (Bule Bridge Cup) Second Prize**

Certificates

2024	Coursera certificate from **DeepLearning.AI: Generative Adversarial Networks (GANs)**
2018	MOOC certificate from **Peking University: Artificial Intelligence Practice**
2016	edX certificate from the **University of Texas at Austin: Embedded Systems**
2015	**National Electronics Professionals: Senior Development Engineer of MCU Application**
2014	**National Computer Rank Examination Level 3: Embedded System Development**

Skills

Machine Learning, **Molecular dynamics (MD) simulations**, **Embedded Systems Programming**, Linux, Git

Languages

Chinese (native), **English** (proficient), **Japanese** (basic), **Python**, **C**

Activities

01/2025 - 05/2025	**Teaching assistant** for PHYS-E0412 - Computational Physics D, Aalto University
2021/11	Teaching "Introduction to Deep Learning" for postgraduates in Physics , Wenzhou University.
09/2019 - 11/2019	**Teaching assistant** for "C programming language", Beihang University
05/2018 - 11/2019	**System manager** of the Linux cluster, Beihang University

Hobby Projects

2022	Guitar Simulations From Wave Equations: Music Demo
2022	Huanbu: A cross-platform and full functional metronome app based on Python
2020	Adversarial **Inverse Reinforcement Learning** Implementation for Mountain Car
2019	Steady Hand Game Device Based on **Raspberry Pi**
2016	Handheld Game Console Based on **Texas Instruments TM4C123G**

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