

JIE HUANG

PERSONAL DATA

GENDER: Male
 NATIONALITY: Chinese
 ADDRESS: Kide 2501, Department of Applied Physics, Aalto University, Finland
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 WEBSITE: <https://way2ml.github.io>

EDUCATION

05/2023–now	Doctoral Researcher in Applied Physics , SIN group 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. Shibei 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. **Jie Huang**, Niko Oinonen, Fabio Priante, Filippo Federici Canova, Lauri Kurki, Chen Xu, and Adam S. Foster*, [Improving atomic force microscopy structure discovery via style-translation](#), 2025
2. Jonas Heggemann, **Jie Huang**, Simon Aeschlimann, Simon Spiller, Adam S. Foster*, and Philipp Rahe*, [Sidestepping Intermolecular Hydrogen Bonds: How Single Water Molecules Adsorb and Assemble on the Calcite \(104\)-\(2x1\) Surface](#), *ACS Nano*, DOI: 10.1021/acsnano.5c05845, 2025
3. 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
4. **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
5. **Jie Huang**, Gang Huang*, and Shibei Li*, [A machine learning model to classify dynamic processes in liquid water](#), *ChemPhysChem*, DOI: 10.1002/cphc.202100599, 2022, [Cover Article](#)
6. **Jie Huang**, Shibei 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
- 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 - 06/2026 | [Teaching assistant](#) for PHYS-E0412 - Computational Physics D, Aalto University
- 2021/11 | Teaching "[Introduction to Deep Learning](#)" for postgraduates in Physics , Wenzhou University.
- 05/2018 - 11/2019 | [System manager](#) of the Linux cluster, Beihang University

HOBBY PROJECTS

- 2025 | [Sphinx-molview](#): A Sphinx extension for interactive 3D molecular visualization
- 2025 | [UP2Git](#): A Linux system tray app for uploading files to GitHub
- 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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