Curriculum Vitae

Yi-Te Huang

Taiwan
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Experiences

07.2025 – present **Postdoctoral Researcher** at Department of Physics and Center for Quantum Frontiers of Research and Technology (QFort), National Cheng Kung University, Tainan, Taiwan (Prof. Yueh-Nan Chen's group).

04.2025 – 05.2025 **Student Trainee** at RIKEN Center for Quantum Computing, RIKEN, Wakoshi, Saitama, Japan (Dr. Franco Nori's group).

10.2024 – 03.2025 **Student Trainee** at Theoretical Quantum Physics Laboratory, Cluster for Pioneering Research, RIKEN, Wakoshi, Saitama, Japan (Dr. Franco Nori's group).

10.2023 – 11.2023 **Visiting Scholar** at Theoretical Quantum Physics Laboratory, Cluster for Pioneering Research, RIKEN, Wakoshi, Saitama, Japan (Dr. Franco Nori's group).

Education

09.2020 – 06.2025 **Ph.D. Physics**, National Cheng Kung University, Tainan, Taiwan.
Advisor : Dr. Yueh-Nan Chen
Thesis title : *Simulating Quantum Dynamics on Classical and Quantum Computers*

09.2016 – 06.2020 **B.Sc. Physics**, National Cheng Kung University, Tainan, Taiwan.
Studies focused on **Physics**, **Quantum Mechanics**, and **Computer Science**.
Completed project : Benchmarking quantum state transfer on quantum devices
[published in Physical Review Research **3**, 023038 (2021)]

Awards and Honors

2023 **Honorary Member of Phi Tau Phi Scholastic Honor Society**
awarded by The Phi Tau Phi Scholastic Honor Society of the Republic of China.

2022 **NCTS Physics 2022 Student Outstanding Paper Award**
awarded by National Center for Theoretical Sciences (Physics Division).

Certificate of Excellence in the Oral Presentation of the 2022 Annual Meeting of the Physical Society of Taiwan
awarded by The Physical Society of Taiwan.

Successful Grant Applications

10.2024 – 05.2025 **Graduate Students Study Abroad Program - Simulating complex open quantum systems with classical and quantum computers**: funded NTD 525,000 by National Science and Technology Council, Taiwan.

Successful Grant Applications (continued)

08.2024 – 02.2025 — Co-applicant (with Alberto Mercurio and Luca Gravina) of **Documentation for QuantumToolbox.jl**: funded USD 4,000 by Unitary Fund.

10.2023 – 11.2023 — **Pilot Overseas Internship Program - Studying quantum algorithms in RIKEN**: funded NTD 76,334 by Ministry of Education, Taiwan.

Certification

2022 — **Chinese Cuisine Cookery - Meat diet** (class **C** skill category), by Ministry of Labor, Taiwan.

Skills

Languages	Strong reading, writing and speaking competencies for Mandarin Chinese and English.
Coding	Julia, Python, C, C++, GIT, Shell Script, LaTeX.
Web Dev.	Html, css, Apache Web Server.
Misc.	Academic research, Linux Server Management, Chinese Cuisine Cookery - Meat diet

List of Publications

Preprints (to be) submitted for publication

1. **Y.-T. Huang**, S.-W. Huang, J.-D. Lin, A. Miranowicz, N. Lambert, G.-Y. Chen, F. Nori, and Y.-N. Chen, "Experimental decoding scrambled quantum information from the future", arXiv:2501.16335 (2025).
2. A. Mercurio, **Y.-T. Huang**, L.-X. Cai, Y.-N. Chen, V. Savona, and F. Nori, "QuantumToolbox.jl: an efficient Julia framework for simulating open quantum systems", arXiv:2504.21440 (2025).

Journal Articles

1. P.-C. Kuo, S.-L. Yang, N. Lambert, J.-D. Lin, **Y.-T. Huang**, and Y.-N. Chen, "Dissipative engineering with strong light–matter coupling for optimized photo-oxidation suppression in organic chromophores", The Journal of Chemical Physics **162**, 244120 (2025).
2. P.-C. Kuo, S.-L. Yang, N. Lambert, J.-D. Lin, **Y.-T. Huang**, F. Nori, and Y.-N. Chen, "Non-Markovian skin effect", Physical Review Research **7**, L012068 (2025).
3. P.-R. Lai, J.-D. Lin, **Y.-T. Huang**, H.-C. Jan, and Y.-N. Chen, "Quick charging of a quantum battery with superposed trajectories", Physical Review Research **6**, 023136 (2024).
4. **Y.-T. Huang**, P.-C. Kuo, N. Lambert, M. Cirio, S. Cross, S.-L. Yang, F. Nori, and Y.-N. Chen, "An efficient Julia framework for hierarchical equations of motion in open quantum systems", Communications Physics **6**, 1–14 (2023).
5. P.-C. Kuo, N. Lambert, M. Cirio, **Y.-T. Huang**, F. Nori, and Y.-N. Chen, "Kondo QED: The Kondo effect and photon trapping in a two-impurity Anderson model ultrastrongly coupled to light", Physical Review Research **5**, 043177 (2023).
6. F.-J. Chan, **Y.-T. Huang**, J.-D. Lin, H.-Y. Ku, J.-S. Chen, H.-B. Chen, and Y.-N. Chen, "Maxwell's two-demon engine under pure dephasing noise", Physical Review A **106**, 052201 (2022).
7. **Y.-T. Huang**, J.-D. Lin, H.-Y. Ku, and Y.-N. Chen, "Benchmarking quantum state transfer on quantum devices", Physical Review Research **3**, 023038 (2021).

Contributions in International Conferences and Workshops

2024 **An efficient Julia framework for hierarchical equations of motion in open quantum systems**, presented at 24th Asian Quantum Information Science (AQIS) Conference, 26-30 Aug. 2024, Sapporo, Japan. **Poster**

HierarchicalEOM.jl: An efficient Julia framework for hierarchical equations of motion in open quantum systems, presented at 2024 Workshop on Quantum Science and Technology (QST), 01-03 Jul. 2024, Tainan, Taiwan. **Poster**

An efficient Julia framework for hierarchical equations of motion in open quantum systems, presented at The Sixth Poznań Symposium on Quantum Information and Quantum Technologies (QIQTec 2024), 10-13 May 2024, Poznań, Poland. **Contributed Talk**

An efficient Julia framework for hierarchical equations of motion in open quantum systems, presented at Mini-workshop in International Centre for Theory of Quantum Technologies (ICTQT), 07-08 May 2024, Gdańsk, Poland. **Invited Talk**

HierarchicalEOM.jl: An efficient Julia framework for hierarchical equations of motion in open quantum systems, presented at 2024 QFort Workshop, 15-17 Apr. 2024, Tainan, Taiwan. **Poster**

An efficient Julia framework for hierarchical equations of motion in open quantum systems, presented at 2024 QuTiP Developers Workshop, 25-29 Mar. 2024, Saitama, Japan. **Invited Talk**

2023 **HierarchicalEOM.jl: An efficient Julia framework for hierarchical equations of motion in open quantum systems**, presented at 22nd International Conference on Electron Dynamics in Semiconductors, Optoelectronics and Nanostructures (EDISON22), 14-18 Aug. 2023, Münster, Germany. **Poster**

An efficient Julia framework for hierarchical equations of motion in open quantum systems, presented at RIKEN Center for Quantum Computing (RQC) Seminar, 12 Apr. 2023, Saitama, Japan. **Invited Talk**

Heom.jl: An efficient Julia framework for hierarchical equations of motion in open quantum systems, presented at Taiwanese-German Young Researchers Forum on Quantum Information Science, 17 - 19 Feb. 2023, Tainan, Taiwan. **Contributed Talk**

2022 **Amazon Braket Platform**, presented at 2022 Quantum Technology Project Conference, 16 - 17 Dec. 2022, Yilan, Taiwan. **Invited Talk**

Introduction of IBMQ and Amazon Braket, presented at Workshop on Future Computing with Quantum Bits, 15 Nov. 2022, Tainan, Taiwan. **Invited Talk**

Sharing User Experience on IBM Quantum Computers, presented at NTU-IBM Quantum System Users Meeting 2022 and Qiskit Hackathon Taiwan 2022, 19 - 21 Jul. 2022, Taipei, Taiwan. **Invited Talk**

Contributions in International Conferences and Workshops (continued)

Sharing User Experience on Amazon Braket, presented at AWS Introduction and Resource of Quantum Computation Workshop, 07 Apr. 2022, Tainan, Taiwan. **Invited Talk**

Benchmarking Quantum State Transfer on Quantum Devices using Spatio-temporal Steering, presented at Young Researchers Forum on Quantum Information Science, 09 - 11 Feb. 2022, Online. **Contributed Talk**

Benchmarking Quantum State Transfer on Quantum Devices using Spatio-temporal Steering, presented at 2022 Annual Meeting of the Physical Society of Taiwan, 24 - 26 Jan. 2022, Taipei, Taiwan. **Contributed Talk**

2020 **Benchmarking Quantum State Transfer on Quantum Devices using Spatio-temporal Steering**, presented at 2020 International Workshop on Quantum Computing, 31 Aug. - 01 Sep. 2020, New Taipei, Taiwan. **Poster**