

Curriculum Vitae

Dr. **Yi-Te HUANG** (黃亦得)

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 Yi-Te Huang



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Academic Experiences

- 10.2025 – present  **Postdoctoral Research Fellow** 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).
- 08.2026 – present  **Visiting Scientist** at RIKEN Center for Quantum Computing, RIKEN, Wakoshi, Saitama, Japan (Dr. Franco Nori'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).

Education

- 09.2020 – 06.2025  **Ph.D. in Physics**, National Cheng Kung University, Tainan, Taiwan.
Advisor : Prof. Yueh-Nan Chen (陳岳男 教授)
Thesis : *Simulating Quantum Dynamics on Classical and Quantum Computers*
- 09.2016 – 06.2020  **B.Sc. in Physics**, National Cheng Kung University, Tainan, Taiwan.
Studies focused on **Physics**, **Quantum Mechanics**, and **Computer Science**.

Awards and Honors

- 2025  **The Postgraduate Thesis Award** awarded by The Physical Society of Taiwan. 台灣物理學會 2025研究生學位論文獎 特優獎
-  **Outstanding Graduate Student Thesis Award** awarded by College of Science, National Cheng Kung University. 國立成功大學 理學院 114年度研究生優良畢業論文獎
- 2023  **Honorary Member of Phi Tau Phi Scholastic Honor Society** awarded by The Phi Tau Phi Scholastic Honor Society of the Republic of China. 中華民國斐陶斐榮譽學會 榮譽會員
- 2022  **NCTS Physics 2022 Student Outstanding Paper Award** awarded by Physics Division, National Center for Theoretical Sciences. 國家理論科學研究中心 物理組 2022學生優秀理論論文獎
-  **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. 台灣物理學會 2022台灣物理年會口頭發表論文獎

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. 國家科學及技術委員會 113年度補助博士生赴國外研究(千里馬計畫)

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. 教育部 112年度 獎助大學校院選送學生出國研修或海外專業實習(學海築夢計畫)

Certification

- 2022  **Chinese Cuisine Cookery - Meat diet** (class C skill category), by Ministry of Labor, Taiwan. 勞動部 中華民國中餐烹調技術士證(葷食丙級)
- 2025  **Emergency Medical Technician-1 (EMT-1)**, by National Fire Agency, Ministry of the Interior, Taiwan. 內政部消防署 初級救護技術員

Skills

- Languages  Strong reading, writing and speaking competencies for Mandarin Chinese and English.
- Coding  Julia, Python, C, C++, GIT, Shell Script, L^AT_EX.
- Software  I am an admin team member of QuTiP (<https://qutip.org/>), and also a lead developer on the “Quantum Toolbox in Julia” project (<https://qutip.org/QuantumToolbox.jl>).
- Misc.  Linux Server Management, Chinese Cuisine Cookery - Meat diet

List of Publications

As first, co-first, or corresponding* author

Totally 5 papers: 1 paper in Communications Physics, 1 paper in Quantum, 2 papers in Physical Review Research, 1 paper in Physical Review A.

- 1 **Y.-T. Huang**, H.-W. Huang, J.-D. Lin, A. Miranowicz, N. Lambert, G.-Y. Chen, F. Nori, and Y.-N. Chen, “Experimental simulation of postselected closed timelike curves for decoding scrambled quantum information”, [Physical Review Research](#) **8**, 023084 (2026).
- 2 A. Mercurio, **Y.-T. Huang*** (co-first and corresponding author), L.-X. Cai, Y.-N. Chen, V. Savona, and F. Nori, “QuantumToolbox.jl: an efficient Julia framework for simulating open quantum systems”, [Quantum](#) **9**, 1866 (2025).
- 3 **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**, 313 (2023).
- 4 F.-J. Chan, **Y.-T. Huang** (co-first author), 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).
- 5 **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).

As contributed author

Totally 4 papers: 3 papers in Physical Review Research, 1 paper in The Journal of Chemical Physics.

- 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 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 \(2023\)](#).

Preprints (to be) submitted for publication

- 1 H.-W. Huang, K.-F. Chiu, **Y.-T. Huang**, J.-D. Lin, T.-M. Chen, and Y.-N. Chen, “Detecting basis-dependent hardware errors through spatio-temporal quantum steering”, [arXiv:2606.16451 \(2026\)](#).
- 2 P.-R. Lai, J.-D. Lin, **Y.-T. Huang**, P.-C. Kuo, N. Lambert, and Y.-N. Chen, “RC-HEOM hybrid method for non-perturbative open system dynamics”, [arXiv:2603.22833 \(2026\)](#).
- 3 N. Lambert, **Y.-T. Huang**, Y.-N. Chen, P. Menczel, and F. Nori, “Strongly-coupled non-Markovian waveguide QED with input-output HEOM”, [arXiv:2605.20703 \(2026\)](#).

Teaching Experiences

Teaching assistance of NCKU graduate courses

- ☐ Department of Physics, Quantum Mechanics (2), Spring semester (2022)
- ☐ Department of Physics, Quantum Mechanics (1), Fall semester (2021)
- ☐ Department of Physics, Electrodynamics (1), Fall semester (2021)
- ☐ Department of Physics, Statistical Mechanics, Spring semester (2021)
- ☐ Department of Physics, Quantum Mechanics (1), Fall semester (2020)

Teaching assistance of NCKU undergraduate courses

- ☐ Department of Computer Science and Information Engineering, General Physics (2), Spring semester (2020)

Teaching assistance of NCKU modular courses

- ☐ From Quantum Physics to IBM Q, 28 Aug. - 01 Sep. 2023
<https://modular-course.web2.ncku.edu.tw/p/412-1100-25835.php?Lang=zh-tw>
- ☐ From Quantum Physics to IBM Q, 17-21 Jan. 2022
<https://modular-course.web2.ncku.edu.tw/p/412-1100-23781.php?Lang=zh-tw>
- ☐ From Quantum Physics to IBM Q, 06-10 Jul. 2020
<https://modular-course.web2.ncku.edu.tw/p/412-1100-23417.php?Lang=zh-tw>
- ☐ From Quantum Physics to IBM Q, 02-06 Sep. 2019
<https://modular-course.web2.ncku.edu.tw/p/412-1100-2149.php?Lang=zh-tw>

Lecturer of summer school (for graduate students and researchers)

- ☐ Non-Equilibrium Dynamics of Open Quantum Systems, 27–31 Jul. 2026
at École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland
<https://nedoqs2026.epfl.ch/home>

Lecturer of QFort quantum computing micro-courses (for high school students)

- ☐ 7th Micro-Course on Quantum Computing for High School Students, 11-12 Jul. 2026
<https://qfort.ncku.edu.tw/events/312>
- ☐ Trial Class : Cloud Quantum Computer, 08 Nov. 2025
<https://qfort.ncku.edu.tw/events/277>
- ☐ 6th Micro-Course on Quantum Computing for High School Students, 19-20 Jul. 2025
<https://qfort.ncku.edu.tw/events/250>

Teaching Experiences (continued)

- 📖 5th Micro-Course on Quantum Computing for High School Students, 06-07 Jul. 2024
<https://qfort.ncku.edu.tw/events/197>
- 📖 2024 Trial Class : IBM Cloud Quantum Computer, 13 Apr. 2024
<https://qfort.ncku.edu.tw/events/177>
- 📖 4th Micro-Course on Quantum Computing for High School Students, 05-06 Aug. 2024
<https://qfort.ncku.edu.tw/events/102>
- 📖 2023 High School Teachers Workshop – Principles and Practice of Quantum Computing, 01 Feb. 2023
<https://qfort.ncku.edu.tw/events/153>
- 📖 3rd Micro-Course on Quantum Computing for High School Students, 21-22 Jul. 2022
<https://qfort.ncku.edu.tw/events/74>
- 📖 2nd Micro-Course on Quantum Computing for High School Students, 14-15 Aug. 2021
<https://qfort.ncku.edu.tw/events/41>
- 📖 Micro-Course on Quantum Computing for High School Students, 10-14 Aug. 2020
<https://qfort.ncku.edu.tw/events/4>

Contributions to Conferences, Workshops, and Seminars

- 2026 🧑‍🤝‍🧑 **Quantum Toolbox in Julia (1) and Hierarchical Equations of Motion**, presented at 2026 QuTiP Developers Workshop, 08-15 Apr. 2026, Saitama, Japan. 💎 **Invited Talk**
- 🧑‍🤝‍🧑 **Quantum Toolbox in Julia**, presented at Physics Department Seminar, National Sun Yat-sen University, 12 Mar. 2026, Kaohsiung, Taiwan. 💎 **Invited Talk**
- 🧑‍🤝‍🧑 **Quantum Toolbox in Julia**, presented at 2026 Annual Meeting of the Physical Society of Taiwan, 13-15 Jan. 2026, Chiayi, Taiwan. 💎 **Contributed Talk**
- 🧑‍🤝‍🧑 **Experimental decoding scrambled quantum information from the future**, presented at 2026 Cloud Quantum Computing and Digital Annealing User Sharing Session, 09 Jan. 2026, Tainan, Taiwan. 💎 **Invited Talk**
- 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**

Contributions to Conferences, Workshops, and Seminars (continued)

-  **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](#)
-  **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](#)

Research Visits

- 2026  École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, 24 Jul. - 04 Aug. 2026 (hosted by Vincenzo Savona and Alberto Mercurio)
-  RIKEN Center for Quantum Computing (RQC), Saitama, Japan, 13-22 Jul. 2026 (hosted by Franco Nori)

Research Visits (continued)

- ✈️ RIKEN Center for Quantum Computing (RQC), Saitama, Japan, 05-25 Apr. 2026 (hosted by Franco Nori)
- ✈️ RIKEN Center for Quantum Computing (RQC), Saitama, Japan, 19-31 Jan. 2026 (hosted by Franco Nori)
- 2025 ✈️ RIKEN Center for Quantum Computing (RQC), Saitama, Japan, 06-12 Jul. 2025 (hosted by Franco Nori)
- 2024 ✈️ RIKEN, Saitama, Japan, 06 Oct. 2024 - 11 May 2025 (hosted by Franco Nori)
- ✈️ RIKEN, Saitama, Japan, 30 Jul. - 08 Aug. 2024 (hosted by Franco Nori)
- ✈️ Adam Mickiewicz University, Poznań, Poland, 09-14 May 2024 (hosted by Adam Miranowicz)
- ✈️ International Centre for Theory of Quantum Technologies (ICTQT), Gdańsk, Poland, 06-08 May 2024 (hosted by Michał Horodecki and Gerardo Suárez)
- ✈️ RIKEN, Saitama, Japan, 24 Mar. - 03 Apr. 2024 (hosted by Franco Nori)
- 2023 ✈️ RIKEN, Saitama, Japan, 15 Oct. - 15 Nov. 2023 (hosted by Franco Nori)
- ✈️ RIKEN, Saitama, Japan, 09-15 Apr. 2023 (hosted by Franco Nori)