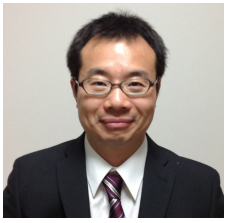
Norihiro Iizuka

Associate Professor, Department of Physics,
National Tsing Hua University
Hsinchu 300044, Taiwan
iizuka@phys.nthu.edu.tw | Homepage | researchmap



Research Interests

Quantum gravity, black holes, holography, string theory, quantum information, entanglement, matrix models, and mathematical physics.

Current Positions

2024–present Associate Professor, Department of Physics, National Tsing Hua University, Taiwan.
2024–present Research Associate Professor, Yukawa Institute for Theoretical Physics, Kyoto University, Japan.

Education

2003 Ph.D. in Physics, Columbia University, United States.
Dissertation: Holographic description of quantum black holes and spacetime.
Advisor: Daniel Kabat.
1998 B.E. in Applied Physics, The University of Tokyo, Japan.

Academic Appointments

2024–present	Associate Professor, National Tsing Hua University, Taiwan.
2014–2024	Assistant Professor, Osaka University, Japan.
2013–2014	Researcher, RIKEN, Japan.
2012–2013	Researcher, Yukawa Institute for Theoretical Physics, Kyoto University, Japan.
2009–2012	Non-Member State Fellow and COFUND Fellow, CERN, Switzerland.
2006–2009	Postdoctoral Fellow, Kavli Institute for Theoretical Physics, University of California, Santa Barbara, United States.
2003–2006	Postdoctoral Fellow, Tata Institute of Fundamental Research, India.

Selected Research Contributions

- Holographic and quantum-gravitational approaches to black-hole dynamics, evaporation, and information loss.
- Non-supersymmetric attractor mechanisms for extremal black holes.
- Matrix models of black-hole thermalization, scrambling, and quantum chaos.
- Genuine multi-entropy and multipartite entanglement in holography, topological phases, and quantum information.

Research Funding and Fellowships

2025–2027	Principal Investigator, NSTC Taiwan, "Black Holes and Quantum Entanglement," Grant No. 114-2112-M-007-025-MY3.
2021–2026	Project Leader, MEXT KAKENHI Grant-in-Aid for Transformative Research Areas (A), "The Natural Laws of Extreme Universe – A New Paradigm for Spacetime and Matter from Quantum Information," Grant No. 21H05184.
2018–2021	Principal Investigator, JSPS KAKENHI Grant-in-Aid for Scientific Research (C), Grant No. 18K03619.
2013–2017	Principal Investigator, JSPS KAKENHI Grant-in-Aid for Young Scientists (B).
2009–2012	CERN Non-Member State Fellowship and COFUND Fellowship.

Supervision and Mentoring

- Supervised doctoral students and postdoctoral researchers in quantum gravity, holography, and quantum information.
- Former Ph.D. students include Kotaro Tamaoka, now Associate Professor at Nihon University, and Takanori Anegawa, now Assistant Professor at Yonago National College of Technology.
- Mentored postdoctoral researchers and collaborators including Akihiro Miyata, Nicolo Zenoni, and Sunil Kumar Sake.

Last updated: June 2026.