YUTO MOTOHASHI

yuto.motohas@gmail.com

EDUCATION

The University of Tokyo, Department of Applied Physics, Faculty of Engineering Tokyo, Japan
B.S. in Applied Physics *Apr. 2019 - Mar. 2024*

RESEARCH EXPERIENCE

Cornell University, Electrical and Computer Engineering Department New York, USA
Research Internship, under Prof. Karan Mehta *Jul. 2023 - Sep. 2023*
· Designed and simulated photonic crystal UV resonators in a novel platform via full 3D FDTD simulations
· Implemented python-based lab interfacing for experiment control

ETH Zurich, Institute for Quantum Electronics Zurich, Switzerland
Research Project, under Prof. Jonathan Home *Sep. 2022 - Jun. 2023*
· Stable Transport of Ion for Multi-Zone Operation by Stray Field Characterization
· Design and characterization of magnetic disk

The University of Tokyo, Photon Science Center Tokyo, Japan
Senior Thesis. under Prof. Kosuke Yoshioka *Apr. 2022 - Mar. 2024*
· Characterization of the laser for the Doppler cooling of Positronium
· Optimization of Ionized Positronium Detection through Simulated Electric Field Modification

WORK EXPERIENCE

Yanekara, Inc., a start-up electric machine company Tokyo, Japan
Internship *Aug. 2021 - Mar. 2022*
· implemented C++-based embedded firmware controlling electric vehicle charging hardware system

SCHOLARSHIPS AND AWARDS

Funai Overseas Scholarship Sep. 2024 - Aug. 2026
· Full cover of tuition fee, medical insurance, and a stipend of $3,000 monthly for two years

GEfIL abroad program scholarship Jul. 2023 - Sep. 2023
· Scholarship for research internship at Cornell

Short Study Abroad Scholarships Sep. 2023 - Jun. 2023
· Scholarship for exchange students, from The University of Tokyo

PUBLICATION

K. Shu, N. Miyamoto, **Y. Motohashi**, R. Uozumi, Y. Tajima, K. Yoshioka, "Development of an optimal laser for chirp cooling of positronium based on chirped pulse-train generator" submitted for publication. *arXiv preprint arXiv:2308.00877*

C. Mordini, A. R. Vasquez, **Y. Motohashi**, M. Müller, M. Malinowski, C. Zhang, K. K. Mehta, D. Kienzler, J. P. Home, "Multi-zone trapped-ion qubit control in an integrated photonics QCCD device", *arXiv preprint arXiv:2401.18056*.

SKILLS

Python, C/C++, Rust, MSoffice, Autodesk Inventor, COMSOL Multiphysics, Lumerica, CST studio suite