

Ming LYU (吕铭)

PhD candidate, Electrical Engineering, Princeton University

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Applied Physics, Optics, Photonics, Semiconductors, Computer Science



I am a PhD student doing research on Quantum Cascade Laser, with physics background and some experience of Quantum Information, Quantum Computing and Quantum Optics. I am interested in Computer Science and Technology and familiar with high-tech development.

EDUCATION

Princeton University 09/2016 - expected 2021	PhD in Electrical Engineering <ul style="list-style-type: none">Advisor : Dr. Claire GmachlQuantum Cascade Laser and GaAs/AlGaAs Photonic Devices
Tsinghua University 08/2012 - 07/2016	B.S. in Physics, Minor in Computer Science <ul style="list-style-type: none">Thesis : "Long Coherence Time Quantum Memory on Ion Trap System with Dynamical Decoupling" (Thesis Advisor : Dr. Kihwan Kim)Graduate with honor ("Ye Qisun" Award, Outstanding Graduate in Beijing)

PUBLICATION

"Design and Optimization of 14-20 μm Wavelength GaAs/AlGaAs Quantum Cascade Lasers", 4th International Workshop on Infrared Technologies (2017), M. Lyu, C. Gmachl
"Single-Qubit Quantum Memory Exceeding Ten-minute Coherence Time", Nature Photonics 11, 646-650 (2017), Y. Wang, M. Um, J. Zhang, S. An, M. Lyu, J.-N. Zhang, L.-M. Duan, D. Yum, K. Kim
"Non-Markovian Dynamics of Open Quantum Systems without Rotating Wave Approximation", Arxiv :1047.5359 (2014), M. Tang*, Y. Wu*, M. Lyu*, J. Tang, Z. Guo, T. Chen, X.-B. Wang (*equal contribution)

SOCIAL SERVICES AND ACTIVITIES

Vice-president of Association of Chinese Students and Scholars at Princeton University (ACSSPU)	03/2017 - PRESENT
President of Student Association for Science and Technology, Physics Department, Tsinghua University	06/2015 - 07/2016
Founder and Team Leader of the Debate Team in Physics Department, Tsinghua University	09/2013 - 05/2016
Vice-president of Student Union, Physics Department, Tsinghua University	09/2014 - 02/2015
Chair of Student Life and Right in Student Union, Physics Department, Tsinghua University	09/2013 - 09/2014
Zhihu.com (Chinese Quora) Outstanding Answerer on Physics and Quantum Physics, with 12.8k followers	

PROFESIONAL EXPERIENCE

University of Waterloo 07/2015 - 09/2015	Research Assistant, THE INSTITUTE FOR QUANTUM COMPUTING (IQC) <ul style="list-style-type: none">Advisor : Dr. Raymond Laflamme, Dr. Guanru FengElectron Spin Resonance implementation of Quantum Computing and Simulation
Princeton University 2017 Fall 2018 Fall	Teaching Assistant, SCHOOL OF ENGINEERING AND APPLIED SCIENCE <ul style="list-style-type: none">EGR 151 : Foundations of Engineering : Mechanics, Energy, and Waves<ul style="list-style-type: none">General physics for engineering freshmenLab sessions for physics and creative thinkingELE 308 : Electronic and Photonic Devices<ul style="list-style-type: none">Fabrication of Si-based devices like MOSFET, CMOS, PN junction, solar cells, etc.

SKILLS

Programing	Python, C, C++, Qt, OpenMP, MATLAB, Mathematica, Bash, Git, \LaTeX , Markdown
Experiment	Cleanroom Fabrication, Nano-structure Imaging, Infrared and Laser Optics, Low Temperature Operation