Aziza Suleymanzade

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EDUCATION

University of Chicago | *Ph.D.* Physics | *MS* Physics — Aug 2021

- Ph.D. Thesis: "Millimeter wave photons for hybrid quantum systems."

University of Cambridge | *MPhil* Physics — Aug 2014

- MPhil Thesis: "Ultracold atoms experiment for trapping ^{39}K in an optical box trap."

Harvard University | *AB* Physics — Aug 2013

ACADEMIC DISTINCTIONS

Boeing Quantum Creators Prize, Chicago — 2024

Deborah Jin Award/APS DAMOP thesis prize winner — 2023

for outstanding doctoral thesis research in Atomic, Molecular and Optical Physics

2023 Rising Stars in Physics, UC Berkeley — 2023

HQI postdoctoral fellow, Harvard University — 2021-present

J de Karman fellow, dissertation prize — 2020-2021

Winstein Prize and **Distinguished Service Award,** Physics Department, University of Chicago — 2017, 2019

NSF MRSEC Graduate Student Fellow — 2017-2018

Lionel de Jersey Harvard-Cambridge Scholar a year-long study at the University of Cambridge — 2013-2014

RESEARCH EXPERIENCE

UC Berkeley | Physics Department — starting 2025

Assistant Professor

Harvard University | Physics Department — 2021-2025

Postdoctoral Researcher| *HQI fellow* | PI: Mikhail Lukin

A strongly coupled cavity-QED system with Silicon vacancy (SiV) defects in diamond nanocavities:

- efficient and high-fidelity spin-photon entanglement for electron and nuclear spins of the SiV^- defect, error-detected spin-photon gates, long-distance entanglement distribution, single photon generation, distributed blind computing, long-baseline entangled telescope arrays

University of Chicago | Physics Department — 2014-2021

Doctoral Researcher | *J. de Karman fellow* | PIs: Jonathan Simon, David Schuster

A hybrid cavity-QED system with Rydberg atoms:

- cryogenic hybrid quantum system for interconverting and entangling single optical and mm-wave photons in cavities using Rydberg atoms as mediators, quantum-limited mm-wave to optical transduction with Rydberg atoms with internal conversion efficiency of 58%, conversion bandwidth of 360 kHz and added noise of 0.6 photons

Millimeter wave circuit-QED platform:

- design, fabrication and measurement of \ 3D and 2D superconducting mm-wave devices at 100GHz for hybrid cavity- and circuit-QED platforms; including high-Q seamless resonators with subwavelength mode volume and optical access for cold atoms experiments, mm-wave photonic crystal cavity, and mm-wave Fabry Perot cavity

University of Cambridge | Atomic Mesoscopic Optical Physics — 2013-2014

Masters Researcher | *Lionel de Jersey Harvard-Cambridge fellow* | PI: Zoran Hadzibabic

Many-body quantum systems of ultra-cold atoms:

- a new experiment for generating a Bose-Einstein Condensate of ^{39}K in a uniform trap potential

Harvard University | Particle Physics and Cosmology Laboratory | ATLAS experiment, LHC — 2010-2012

Undergraduate Researcher |*Herchel Smith fellow* | PI: Melissa Franklin