**Aziza Suleymanzade**

312-952-4343 | azizasuleymanzade@g.harvard.edu

**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 39K in an optical box trap.”

**Harvard University** | *AB* Physics Aug 2013

**ACADEMIC DISTINCTIONS**

**Boeing Quantum Creators Prize,** Chicago2024

**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 prize2020-2021

**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 39K 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