

Jonathan Joseph

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Summary

EE major with a concentration in Photonics and interests in RF, Materials, Photonics, and Optics. Familiarity with C++ programming, Linux, Julia, GNU Radio, and Electronic test equipment.

Education

•Michigan Technological University

Major:Electrical Engineering with Photonics Concentration Minors: Physics, Math

Major GPA:3.78 Total GPA:3.55

Relevant Courses Electronics (A),Photonic Materials & Devices (A),Quantum Physics 1 & 2 (A), Light & Photonic materials(A), & Lasers(A), & Circuits I & II (A)

Research Experience

•Undergrad Researcher

Oct 2021 - Aug 2022

Worked on constructing entangled single photon source. Creating optical bench setups to test optical components. Researching and evaluating component specifications to complete a CHSH inequality test setup.

•Undergrad Researcher

December 2020-April 2021

Research Assistant-Explored different photonic crystal lattices with electromagnetic simulations to decide on potential fabrication designs based on their band diagrams.

Project Experience

•Aerospace Enterprise

September 2020 - Present

Working on the Payload subteam for the Auris mission. Wrote Python scripts to convert data formats and to verify algorithms. Created GNU radio simulations to test hardware and software. Used Spectrum Analyzers and RF signal generators to debug payload components. Designed system level tests to verify mission requirements. Presented Payload subsystem to Air Force Research Lab experts and Air Force officers during the Flight Selection Review where our team was awarded additional funding to complete the satellite's development.

Work Experience

•Photonic Materials Lab TA

January 2022-April 2022

•Ducummon Inc.

June 2020-August 2020

Skills

Programming languages Matlab,Python,Julia,C++.

Design tools MPB,Kicad,GNU Radio.

General computer skills L^AT_EX, Linux Command Line, Bash scripting, Writing reports,Google and Microsoft suits.