JOSHUA SANTY

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EDUCATION

Missouri University of Science and Technology   Rolla, MO
M.S. in Applied Mathematics, Emphasis in Statistics   Aug 2025 - May 2026
B.S. in Physics and **B.S. in Applied Mathematics**, Emphasis in Computational Mathematics   Aug 2021 – May 2025
Cumulative GPA: 3.69/4.0

RELEVANT EXPERIENCE

Undergraduate Researcher – Physics (2024 OURE Fellow)   Rolla, MO
Missouri University of Science and Technology   Aug 2023 – May 2025
- Conducted condensed matter research under research advisor Dr. Medvedeva through the Opportunities for Undergraduate Research Experience (OURE) program; awarded the 2024 OURE Fellowship as one of six recipients university-wide
- Investigated physical and electronic properties of the metal-doped amorphous transparent conducting oxide SnO
- Ran simulations on S&T's Supercomputer Cluster (The Foundry); used Python and Matplotlib to analyze data and generate detailed visualizations, including 3D structures via VESTA
- Co-authored paper published in *Journal of Applied Physics* (2025): https://doi.org/10.1063/5.0246364; prepared manuscript in LaTeX via Overleaf; presented findings at several research conferences to academic and professional audiences

OTHER EXPERIENCE

Library Assistant   Rolla, MO
Missouri University of Science and Technology Curtis Laws Wilson Library   June 2025 – Present
- Provided front-desk patron assistance, shelved and retrieved materials, and supported various library projects

Maintenance Laborer   Rolla, MO
Rolla Parks and Recreation   May 2024 – Aug 2024
- Maintained Rolla's public parks (e.g. mowed lawns, trimmed weeds, blew leaves, applied herbicide, and power-washed graffiti)

UNIVERSITY PROJECTS

Analyzing Phase Locking and Quasiperiodicity   2024
- Analyzed phase locking and quasiperiodicity of cascade juggling using Python, OpenCV, and Matplotlib

Numerical Analysis of the Lorenz System   2024
- Analyzed the chaotic Lorenz system using MATLAB's numerical ODE solvers to study nonlinear dynamic behavior

Physics Advanced Lab   2023
- Collaborated with a team on semester-long physics research projects: Optics Properties, and Sonoluminescence

ACTIVITIES

Society of Physics Students Officer   Rolla, MO
Missouri University of Science and Technology   Jan 2024 – Jan 2025
- Elected Historian Officer; organized academic resources, maintained chapter records, and promoted engagement – contributing to increased engagement, participation, and long-term chapter continuity

Media Team - Presentation Lead   Rolla, MO
Christian Campus Fellowship   Oct 2023 – May 2025
- Prepared and ran slides, announcements, and music transitions for weekly worship events (150+ attendees) while coordinating with staff and managing real-time technical adjustments under pressure

ADDITIONAL

Technical Skills: Python, R, MATLAB, LaTeX, Matplotlib, OpenCV, Git, Electronic Instrumentation, Basic Circuit Analysis
Awards: OURE Fellowship Research Award (2024), Fuller Physics Research Competition Winner (2024), AIP Global Physics Summit Presenter (2025), Sigma Pi Sigma Physics and Astronomy Honor Society (2023)