

Brevin Tilmon

I am a PhD candidate skilled in computational photography, computer vision, and robotics. My research focuses on developing algorithms and hardware for dynamic vision sensors.

PERSONAL

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EDUCATION

Ph.D. Electrical Engineering 2019-Present
University of Florida
Advisor: Dr. Sanjeev Koppal

B.S. Engineering Physics 2015-2019
Murray State University, 3.8/4.0

PUBLICATIONS

Available at <https://btilmon.github.io/>

- Brevin Tilmon, Eakta Jain, Silvia Ferrari, Sanjeev Koppal. “FoveaCam: A MEMS Mirror-Enabled Foveating Camera”. **International Conference on Computational Photography 2020**.
- Francesco Pittaluga, Zaid Tasneem, Justin Folden, Brevin Tilmon, Ayan Chakrabarti, Sanjeev Koppal. “A MEMS-Based Foveating LIDAR to Enable Real-Time Adaptive Depth Sensing”. **arXiv 2020**.
- Kristofer Henderson, Xiaomeng Liu, Justin Folden, Brevin Tilmon, Suren Jayasuriya, Sanjeev Koppal. “Design and Calibration of a Fast Flying-Dot Projector for Dynamic Light Transport Acquisition”. **Transactions on Computational Imaging 2020**.
- Gheorge Bunget, Brevin Tilmon, Andrew Yee, Dylan Stewart, James Rogers, et al. “Novel Approach of Wavelet Analysis for Nonlinear Ultrasonic Measurements and Fatigue Assessment of Jet Engine Components”. **American Institute of Physics 2018**.

EXPERIENCE

- **Graduate Research Assistant** 2019-Present
Florida Optics and Computational Sensor Lab, University of Florida
– Design algorithms and hardware for dynamic vision sensors (cameras, depth sensors, projectors).
- **Undergraduate Research Intern** 2018
Florida Optics and Computational Sensor Lab, University of Florida
– Developed projector-camera system contributing to a publication in Transactions on Computational Imaging as part of the Summer Undergraduate Research at Florida program.
- **Undergraduate Research Assistant** 2016-2019
Non Destructive Evaluations Lab, Murray State University
– Developed denoising wavelet algorithm in MATLAB that contributed to a publication in American Institute of Physics.

- **Electrical Engineering Intern** 2017
Berry Global Inc.
 - Developed python application for real time control of production systems.
- **IEEE Robotics President** 2017-2019
Murray State University IEEE Robotics Branch
 - Competed in IEEE SoutheastCon Hardware(Robotics) Competition. Developed fully autonomous robots with team of classmates, placed top 20 percent in 2018 and 2019.

AWARDS

NSF GRFP Honorable Mention 2020

Graduate School Preeminence Award, University of Florida

Sigma Pi Sigma, Murray State University

Jesse Jones Endowment, Murray State University

Engineering Physics Housing Scholarship, Murray State University

SKILLS

Programming: C/C++, Python, MATLAB

Frameworks: OpenCV, PyTorch

System Design: Machine vision cameras, depth sensors, MEMS devices

Graduate courses: Digital Signal Processing, Machine Learning, Adaptive Signal Processing