Brevin Tilmon

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RESEARCH STATEMENT

My research interests are **Computer Vision**, **Computational Photography**, and **Machine Learning**. I am interested in developing computational cameras for active vision and robotics tasks.

EDUCATION

University of Florida, Gainesville, FL *2019.9 - 2025.5(expected)*
PhD Student, Electrical and Computer Engineering Department, Advisor: Prof. Sanjeev Koppal

Murray State University, Murray, KY *2015.9 - 2019.5*
Bachelor of Science, Engineering Physics, GPA: 3.8/4.0

PUBLICATIONS

1. **Brevin Tilmon**, Eakta Jain, Silvia Ferrari, Sanjeev Koppal. FoveaCam: A MEMS Mirror-Enabled Foveating Camera. *International Conference on Computational Photography 2020.*
2. 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.*
3. 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. *IEEE Transactions on Computational Imaging 2020.*
4. 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.*

RESEARCH EXPERIENCE

University of Florida, Gainesville, FL *2019.8 - 2025.5(expected)*
FOCUS Lab
Research Assistant, Advisor: Prof. Sanjeev Koppal

Project 1: Foveating Cameras
- Built FoveaCam, a camera equipped with a MEMS mirror in-camera to near-instantly modulate its field of view.
- Developed deep reinforcement learning control algorithms to optimally modulate FoveaCam field of view to increase accuracy for computer vision tasks.

AWARDS

NSF GRFP Honorable Mention 2020
Graduate School Preeminence Award, University of Florida 2019-2024
Kirkland Fellowship, University of Florida 2019-2021
Jesse & Deborah Jones Scholarship, Murray State University 2015-2019
Housing Scholarship, Murray State University 2015-2018

SKILLS

Programming: C/C++, Python, MATLAB
Sensors and Robotics: Machine vision and depth cameras, Embedded Systems, Optics Bench