

# Brevin Tilmon

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## RESEARCH STATEMENT

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I am interested in developing computational cameras for active computer vision and robotics tasks.

## EDUCATION

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**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

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- 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**. *IEEE 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*.

## RESEARCH EXPERIENCE

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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 control algorithms to optimally modulate FoveaCam field of view to increase computer vision performance.

## AWARDS

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

## SKILLS

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**Programming:** C/C++, Python, MATLAB

**Sensors and Robotics:** Machine vision and depth cameras, Embedded Systems, Optics Bench