

# Brevin Tilmon

Homepage: <https://btilmon.github.io>

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## Education

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- University of Florida** 5/2019 - 5/2023 (expected)  
Ph.D. Electrical and Computer Engineering  
Advisor: Sanjeev Koppal
- Murray State University** 8/2015 - 5/2019  
B.S. Engineering Physics

## Experience

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- Snap Inc.** 5/2022 - Present  
**Research Intern, Computational Imaging Group**  
Supervisors: Sizhuo Ma, Yicheng Wu and Jian Wang  
Working on computational imaging for mobile devices.
- Meta** 8/2021 - 12/2021  
**Research Intern, Reality Labs**  
Supervisors: Shuo Chen Su and Michael Hall  
Developed depth estimation algorithm for efficient dynamic occlusion on augmented and virtual reality devices.
- NASA Ames Research Center** 5/2021 - 8/2021  
**Research Intern, Intelligent Robotics Group**  
Supervisors: Michael Dille and Uland Wong  
Developed a simulator and 3D reconstruction algorithms to improve reconstruction capabilities of a computational imaging system.
- University of Florida** 5/2019 - Present  
**Graduate Research Assistant, FOCUS Lab**  
Advisor: Sanjeev Koppal  
Developed computational imaging systems and algorithms for efficient computer vision.

## Publications

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- SaccadeCam: Adaptive Visual Attention for Monocular Depth Sensing**  
B. Tilmon and S. J. Koppal  
IEEE/CVF International Conference on Computer Vision (ICCV), 2021
- Fast Foveating Cameras for Dense Adaptive Resolution**  
B. Tilmon, E. Jain, S. Ferrari and S. J. Koppal  
IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI), 2021
- FoveaCam: A MEMS Mirror-Enabled Foveating Camera**  
B. Tilmon, E. Jain, S. Ferrari and S. J. Koppal.  
IEEE International Conference on Computational Photography (ICCP), 2020
- Towards a MEMS-based Adaptive LIDAR**  
F. Pittaluga, Z. Tasneem, J. Folden, B. Tilmon, A. Chakrabarti and S. J. Koppal.  
International Conference on 3D Vision (3DV), 2020
- Design and Calibration of a Fast Flying-Dot Projector for Dynamic Light Transport Acquisition**  
K. Henderson, X. Liu, J. Folden, B. Tilmon, S. Jayasuriya and S. J. Koppal.  
IEEE Transactions on Computational Imaging 2020

## **Novel Approach of Wavelet Analysis for Nonlinear Ultrasonic Measurements and Fatigue Assessment of Jet Engine Components**

G. Bunget, B. Tilmon, A. Yee, D. Stewart, J. Rogers, et al.  
American Institute of Physics 2018

## **Patents**

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### **Efficient Dynamic Occlusion based on Stereo Vision**

B. Tilmon, S. Su, M. Hall  
under review, 2022

### **Fast Foveation Camera and Controlling Algorithms**

S. J. Koppal, Z. Tasneem, D. Wang, H. Xie, B. Tilmon  
US16844597, 2020

## **Awards**

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**National Science Foundation Graduate Research Fellowship** 2021  
**Honorable Mention**

**Graduate School Preeminence Award, University of Florida** 2019 - 2024  
Selective fellowship for competitive PhD applicants.

**Jesse & Deborah Jones Endowment Scholarship, Murray State University** 2015 - 2019  
Merit scholarship covered housing and partial tuition.