Brevin Tilmon

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Education

PhD, Electrical and Computer Engineering, University of Florida — 2019 - Present
BSE, Engineering Physics, Murray State University — 2015 - 2019

Experience

Facebook, Facebook Reality Labs — 2021
Research Intern
Working on 3D computer vision for AR/VR.

NASA, Intelligent Robotics Group — 2021
Research Intern
Working on 3D reconstruction and BRDF recovery.

University of Florida, FOCUS Lab — 2019 - Present
Graduate Research Assistant, Advisor: Sanjeev Koppal
Developing computer vision algorithms and computational imaging systems.

Publications

1. SaccadeCam: Adaptive Visual Attention for Monocular Depth Sensing
   B. Tilmon, S. J. Koppal
   arXiv, 2021
2. Fast Foveating Cameras for Dense Adaptive Resolution
   B. Tilmon, E. Jain, S. Ferrari and S. J. Koppal
   Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2021
3. FoveaCam: A MEMS Mirror-Enabled Foveating Camera
   B. Tilmon, E. Jain, S. Ferrari, S. J. Koppal.
   International Conference on Computational Photography (ICCP), 2020
4. Towards a MEMS-based Adaptive LIDAR
   F. Pittaluga, Z. Tasneem, J. Folden, B. Tilmon, A. Chakrabarti, S. J. Koppal.
   International Conference on 3D Vision (3DV), 2020
5. Design and Calibration of a Fast Flying-Dot Projector for Dynamic Light Transport Acquisition
   K. Henderson, X. Liu, J. Folden, B. Tilmon, S. Jayasuriya, S.J. Koppal.
   Transactions on Computational Imaging (TCI), 2020
6. 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

Awards

NSF GRFP Honorable Mention — 2020
Graduate School Preeminence Award, University of Florida — 2019
Kirkland Fellowship, University of Florida — 2019

Skills

Software: Python, C++, CUDA, NVIDIA OptiX, Mitsuba
Hardware: Depth/RGB Cameras, Embedded Systems, Optics Bench