Samuel Silverman

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Education

PhD, Computer Science 2021-Present
Boston University, Boston, MA
Advisor: Emily Whiting

MS, Computer Science 2019-2021
Columbia University, New York, NY

BS, Computer Science 2015-2019
University of Massachusetts Amherst, Amherst, MA

Publications

Samuel Silverman, Kelsey L. Snapp, Keith A. Brown, Emily Whiting. 2024. *Data-Driven Nonlinear Deformation Design of 3D-Printable Shells*. **In Submission**.
https://doi.org/10.48550/arXiv.2408.15097.

Kelsey L. Snapp, Samuel Silverman, Richard Pang, Thomas M. Tiano, Timothy J. Lawton, Emily Whiting, Keith A. Brown 2024. *A Physics-Informed Impact Model Refined by Multi-Fidelity Transfer Learning*. **Extreme Mechanics Letters**.
https://doi.org/10.1016/j.eml.2024.102223.

Kelsey L. Snapp, Benjamin Verdier, Aldair E. Gongora, Samuel Silverman, Adedire D. Adesiji, Elise F. Morgan, Timothy J. Lawton, Emily Whiting, Keith A. Brown. 2024. *Superlative Mechanical Energy Absorbing Efficiency Discovered Through Self-Driving Lab-Human Partnership*. **Nature Communications**.
https://doi.org/10.1038/s41467-024-48534-4.

Vishnu Nair, Jay L. Karp, Samuel Silverman, Mohar Kalra, Hollis Lehv, Faizan Jamil, Brian A. Smith. 2021. *Navstick: Making Video Games Blind-Accessible via the Ability to Look Around*. **Proceedings of the 34th Annual ACM Symposium on User Interface Software and Technology**.
https://doi.org/10.1145/3472749.3474768.

Employment

Charles River Analytics 2021
Software Engineer Intern
Member of the Sensing, Perception, and Applied Robotics Division. Implemented algorithms to estimate detected objects' real-world positions and dimensions using data from a smart maritime

camera. Also built a pipeline to convert trained PyTorch, TensorFlow, XGBoost, and LightGBM classifiers from Python to C++ for efficient deployment.

Open-Source Software

GCS
Python library for generating STL meshes of generalized cylindrical shells (GCS).

Invited Talks

Data-Driven Nonlinear Deformation Design of 3D-Printable Shells March 8, 2023
Computational Fabrication Group
University of Washington, Seattle, WA

Data-Driven Nonlinear Deformation Design of 3D-Printable Shells March 27, 2023
Transformative Robotics Lab
Northeastern University, Boston, MA

Teaching

Teaching Assistant Spring 2023
CAS CS 581: Computational Fabrication
Boston University, Boston, MA

Course Assistant Fall 2020
COMS 4170: User Interface Design
Columbia University, New York, NY