

Runfeng Li

runfeng_li@brown.edu | ranrandy.github.io

About Me

I do research in computer vision, computational imaging, and computer graphics.

Education

Brown University <i>Master of Science in Computer Science</i>	Sep 2023 – May 2025 <i>Providence, RI</i>
University of Illinois Urbana-Champaign <i>Bachelor of Science in Mathematics and Computer Science</i>	Jan 2021 – May 2023 <i>Champaign, IL</i>
Columbia University <i>Visiting Student, Fu Foundation School of Engineering and Applied Science</i>	Sep 2020 – Dec 2020 <i>New York, NY</i>
Tianjin University (Transferred out) <i>Bachelor of Science in Electrical Engineering - Qiusi Elite Class</i>	Sep 2018 – June 2020 <i>Tianjin, China</i>

Publications

- [1] **Runfeng Li**, Mikhail Okuney, Zixuan Guo, Anh Duong, Christian Richardt, Matthew O’Toole, James Tompkin. Time of the Flight of the Gaussians: Optimizing Depth Indirectly in Dynamic Radiance Fields. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025.
- [2] Yiqing Liang, Mikhail Okuney, Mikaela Angelina Uy, **Runfeng Li**, Leonidas J. Guibas, James Tompkin, Adam Harley. Monocular Dynamic Gaussian Splatting: Fast, Brittle, and Scene Complexity Rules. In Review.

Invited Talks

- [1] New England Computer Vision (NECV) Workshop, 2024: *Time of the Flight of the Gaussians: Fast and Accurate Dynamic Time-of-Flight Radiance Fields*. [8 minutes]

Teaching Experience

Machine Learning Course Assistant <i>University of Illinois Urbana-Champaign. CS 446. CS 307.</i>	Aug 2022 – Dec 2022
---	---------------------

Selected Projects

3D Gaussian Physics Simulation and Material Property Reconstruction <ul style="list-style-type: none">Implemented PhysGaussian using Taichi for photorealistic physics simulationProposed reconstructing elasticity fields through differentiable simulation of multi-view videos	Mar 2024 - May 2024
Raw 3D Gaussian Splatting for High Dynamic Range (HDR) Reconstruction <ul style="list-style-type: none">Proposed 3D Gaussian reconstruction from noisy raw RGB signals using RawNeRF scenes	Oct 2023 - Dec 2023
Real-Time Gradient Domain HDR Compression <ul style="list-style-type: none">Implemented single and multi-grid Poisson PDE solvers for the HDRC method in CUDA/C++Achieved real-time (100-200Hz) HDR tonemapping for 1k-2k resolution images	Oct 2023 - Dec 2023