

# Brandon Yushan Feng

✉ [yfeng97@umd.edu](mailto:yfeng97@umd.edu)  
📄 [brandonyfeng.github.io](https://brandonyfeng.github.io)

## Education

- 2019–2023 **Ph.D. in Computer Science**, *University of Maryland*.  
2018–2019 **M.S. in Statistics**, *University of Virginia*.  
2015–2018 **B.A. in Computer Science and Statistics**, *University of Virginia*.

## Research Interests

My research interest centers around computational imaging, mid-level vision, and computational photography. My goal is to extend the boundary of visible reality for humans, designing physics-inspired machine learning algorithms that augment and unlock human abilities to perceive and create information.

## Publications

- Science Advances **NeuWS: Neural Wavefront Shaping for Guidestar-Free Imaging Through Static and Dynamic Scattering Media.**  
B. Y. Feng\*, H. Guo\*, M. Xie, V. Boominathan, M. K. Sharma, A. Veeraraghavan, C. A. Metzler.  
Science Advances 2023.
- SIGGRAPH Asia 2022 **VIINTER: View Interpolation With Implicit Neural Representations of Images.**  
B. Y. Feng, S. Jabbireddy, A. Varshney.  
SIGGRAPH Asia 2022.
- ECCV 2022 **PRIF: Primary Ray-based Implicit Function.**  
B. Y. Feng, Y. Zhang, D. Tang, R. Du, A. Varshney.  
European Conference on Computer Vision (ECCV) 2022.
- IEEE TVCG **Neural Subspaces for Light Fields.**  
B. Y. Feng, A. Varshney.  
IEEE Transactions on Visualization and Computer Graphics, 2022.
- IEEE JSAT **TurbuGAN: An Adversarial Learning Approach to Spatially-Varying Multi-frame Blind Deconvolution with Applications to Imaging Through Turbulence.**  
B. Y. Feng\*, M. Xie\*, C. A. Metzler.  
IEEE Journal on Selected Areas in Information Theory, 2022.
- ICCV 2021 **SIGNET: Efficient Neural Representation for Light Fields.**  
B. Y. Feng, A. Varshney.  
International Conference on Computer Vision (ICCV) 2021. (Oral - Top 3%)
- Protein Science **Benchmarking AlphaFold for Protein Complex Modeling Reveals Accuracy Determinants.**  
R. Yin, B. Y. Feng, A. Varshney, R. G. Pierce.  
Protein Science, 31 (8).

- UIST 2021 **GazeChat: Enhancing Virtual Conferences with Gaze-aware 3D Photos.**  
Z. He, K. Wang, B. Y. Feng, R. Du, K. Perlin.  
ACM Symposium on User Interface Software and Technology (UIST) 2021.
- 3DV 2020 **Deep Depth Estimation on 360° Images with a Double Quaternion Loss.**  
B. Y. Feng, W. Yao, Z. Liu, A. Varshney.  
International Conference on 3D Vision (3DV) 2020.
- ISBI 2019 **Prostate Segmentation from 3D MRI Using a Two-stage Model and Variable-input Based Uncertainty Measure.**  
H. Pan, B. Y. Feng, C. Meyer, X. Feng.  
2019 IEEE 16th International Symposium on Biomedical Imaging (ISBI) 2019.
- ISBI 2019 **A Self-adaptive Network for Multiple Sclerosis Lesion Segmentation from Multi-contrast MRI with Various Imaging Sequences.**  
B. Y. Feng, H. Pan, C. Meyer, X. Feng.  
2019 IEEE 16th International Symposium on Biomedical Imaging (ISBI) 2019.

## Talks

- 2022/12/16 **Massachusetts Institute of Technology** Scene Representation Group.  
Designing Neural Fields of Rays and Pixels.  
Host: Dr. Vincent Sitzmann
- 2022/10/21 **Rice University** Computational Imaging Lab.  
Implicit Neural Representations for Graphics and Vision.  
Host: Dr. Ashok Veeraraghavan and Weiyun Jiang
- 2022/09/23 **University of Maryland** Vision and Learning Lab.  
Implicit Neural Representations for Graphics and Vision.  
Host: Dr. Jia-Bin Huang
- 2022/08/30 **University of Texas at Austin** Visual Informatics Group.  
Efficient Implicit Neural Representation for 3D Shapes.  
Host: Dr. Zhangyang (Atlas) Wang and Zhiwen Fan
- 2022/07/15 **Optica Imaging Congress COSI.**  
Adversarial Sensing for Sub-Diffraction Imaging.
- 2022/06/07 **Google** AR.  
Primary Ray-based Implicit Function.  
Host: Dr. Yinda Zhang

## Service

- Journal IEEE Transactions on Pattern Analysis and Machine Intelligence  
Reviewer IEEE Transactions on Image Processing  
IEEE Transactions on Circuits and Systems for Video Technology
- Conference IEEE Conference on Computer Vision and Pattern Recognition (CVPR) - 2022  
Reviewer Neural Information Processing Systems (NeurIPS) - 2022  
International Conference on Machine Learning (ICML) - 2022

University Organizer, University of Maryland Computer Vision Seminar - 2022  
Service Organizer, Computational Imaging Workshop at Technica (largest hackathon for underrepresented genders) - 2022  
Reviewer, University of Maryland Computer Science Graduate Program Application - 2020, 2021, 2022

## Work Experience

2022-2023 **Research Scientist Intern**, *Google*, San Francisco, CA.  
2019-2022 **Graduate Research Assistant**, *University of Maryland*, College Park, MD.  
2018-2019 **Research Intern**, *Springbok*, Charlottesville, VA.