GUANDAO YANG

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EMPLOYMENTS

Assistant Professor Aug 2026 - Now
University of Texas at Austin
Chandra Department of Electrical and Computer Engineering

Senior Research Scientist and Engineer May 2025 - Now
Apple Inc.

EDUCATION

Postdoctoral Scholar Aug 2023 - Apr 2025
Stanford University
Advised by Leonidas J. Guibas and Gordon Wetzstein

Ph.D., Cornell University July 2018 - July 2023
Advised by Serge Belongie and Bharath Hariharan

Bechelar of Arts, Cornell University August 2014 - May 2018
Major: Mathematics and Computer Science

PUBLICATIONS

[Lee+26] S. Lee, G. **Yang**, S. Choi, S. Jeong, and G. Wetzstein. "Differentiable Etch Proximity Correction with Transformer-Based Optimization". In: *IEEE Transactions on Semiconductor Manufacturing* (2026).

[Sun+26] Q. Sun, K. Nakayama, J. N. Yan, Q. Huang, A. Rush, L. Guibas, G. Wetzstein, J. Liao, and G. **Yang**. "MeshFlow: Mesh Generation with Equivariant Flow Matching". In: *ACM SIGGRAPH* (2026).

[Xia+26] J. Xiao, M. Gao, S. Weber, G. **Yang**, and D. Cremers. "Functional Attention: From Pairwise Affinities to Functional Correspondences". In: *ICML* (2026).

[Den+25] Y. Deng, W. Xian, G. **Yang**, L. Guibas, G. Wetzstein, S. Marschner, and P. Debevec. "Self-Calibrating Gaussian Splatting for Large Field of View Reconstruction". In: *ICCV* ***Highlight*** (2025).

[Cho+25] G. Chou, W. Xian, G. **Yang**, M. Abdelfattah, B. Hariharan, N. Snavely, N. Yu, and P. Debevec. "FlashDepth: Real-time Streaming Video Depth Estimation at 2K Resolution". In: *ICCV* ***Highlight*** (2025).

[Guo+25] Y. Guo*, L. Xie*, Z. Chen, K. Yu, R. Po, G. **Yang**, G. Wetztein, and H. Wen. "ImageGem: In-the-wild Generative Image Interaction Dataset for Generative Model Personalization". In: *ICCV* (2025).

[Nak+25] K. Nakayama*, J. Ackermann*, T. L. Kesdogan*, Y. Zheng, M. Korosteleva, O. Sorkine-Hornung, L. J. Guibas, G. **Yang**, and G. Wetzstein. "AIpparel: A Large Multimodal Generative Model for Digital Garments". In: *CVPR* ***Highlight*** (2025).

[Gu+25] Y. Gu, I. Huang, J. Je, G. **Yang**, and L. Guibas. "BlenderGym: Benchmarking Foundational Model Systems for Graphics Editing". In: *CVPR* ***Highlight*** (2025).

[Che+25] A. Chetan, G. **Yang**, Z. Wang, S. Marschner, and B. Hariharan. "Accurate Differential Operators for Hybrid Neural Fields". In: *CVPR* (2025).

[Zha+25] Y. Zhang, G. **Yang**, L. Guibas, and Y. Yang. "InfoGS: Efficient Structure-Aware 3D Gaussians via Lightweight Information Shaping". In: *ICLR* (2025).

[Je+24] J. Je*, J. Liu*, G. **Yang***, B. Deng*, S. Cai, G. Wetzstein, O. Litany, and L. Guibas. "Robust Symmetry Detection via Riemannian Langevin Dynamics". In: *SIGGRAPH Asia* (2024).

[Hua+24a] J. Huang, G. **Yang**, Z. Wang, and J. J. Park. "DiffusionPDE: Generative PDE-Solving Under Partial Observation". In: *NeurIPS* (2024).

[Wu+24a] T. Wu, Y. Xu, R. Po, M. Zhang, G. **Yang**, J. Wang, Z. Liu, D. Lin, and G. Wetzstein. "FiVA: Fine-grained Visual Attribute Dataset for Text-to-Image Diffusion Models". In: *NeurIPS Datasets and Benchmarks Track* (2024).

[HYG24] I. Huang, G. **Yang**, and L. Guibas. "BlenderAlchemy: Editing 3D Graphics with Vision-Language Models". In: *ECCV* (2024).

[Zhe+24] Y. Zheng*, Q. Zhao*, G. **Yang**, W. Yifan, D. Xiang, F. Dubost, D. Lagun, T. Beeler, F. Tombari, L. Guibas, and G. Wetzstein. "PhysAvatar: Learning the Physics of Dressed 3D Avatars from Visual Observations". In: *ECCV* (2024).

[Tun+24] J. Tung, G. Chou, R. Cai, G. **Yang**, K. Zhang, G. Wetzstein, B. Hariharan, and N. Snavely. "MegaScenes: Scene-Level View Synthesis at Scale". In: *ECCV* (2024).

[Li+24] Z. Li*, G. **Yang***, Q. Zhao, X. Deng, L. J. Guibas, B. Hariharan, and G. Wetzstein. "Neural Control Variates via Automatic Integration". In: *SIGGRAPH* (2024).

[Wu+24b] T. Wu*, G. **Yang***, Z. Li*, K. Zhang, Z. Liu, L. Guibas, D. Lin, and G. Wetzstein. "GPT-4V (ision) is a Human-Aligned Evaluator for Text-to-3D Generation". In: *CVPR* (2024).

[Po+24] R. Po, G. **Yang**, K. Aberman, and G. Wetzstein. "Orthogonal adaptation for modular customization of diffusion models". In: *CVPR* ***Highlight*** (2024).

[Li+23] Z. Li*, G. **Yang***, X. Deng, C. De Sa, B. Hariharan, and S. Marschner. "Neural Caches for Monte Carlo Partial Differential Equation Solvers". In: *SIGGRAPH Asia* (2023).

[Uy+23] M. A. Uy, K. Nakayama, G. **Yang**, R. K. Thomas, L. Guibas, and K. Li. "Nerf revisited: Fixing quadrature instability in volume rendering". In: *NeurIPS* (2023).

[Yan+22] G. **Yang***, S. Benaim*, V. Jampani, K. Genova, J. Barron, T. Funkhouser, B. Hariharan, and S. Belongie. "Polynomial neural fields for subband decomposition and manipulation". In: *NeurIPS* (2022).

[Luo+21] K. Luo*, G. **Yang***, W. Xian, H. Haraldsson, B. Hariharan, and S. Belongie. "Stay positive: Non-negative image synthesis for augmented reality". In: *CVPR* ***(Oral)*** (2021).

[Yan+21] G. **Yang**, S. Belongie, B. Hariharan, and V. Koltun. "Geometry processing with neural fields". In: *NeurIPS* (2021).

[Cai+20] R. Cai*, G. **Yang***, H. Averbuch-Elor, Z. Hao, S. Belongie, N. Snavely, and B. Hariharan. "Learning gradient fields for shape generation". In: *ECCV* ***(Spotlight)*** (2020).

[Yan+19a] G. **Yang***, X. Huang*, Z. Hao, M.-Y. Liu, S. Belongie, and B. Hariharan. "Pointflow: 3d point cloud generation with continuous normalizing flows". In: *ICCV* ***(Oral)*** (2019).

[Yan+19b] G. **Yang**, T. Zhang, P. Kirichenko, J. Bai, A. G. Wilson, and C. De Sa. "SWALP: Stochastic weight averaging in low precision training". In: *ICML* (2019).

[Cui+18] Y. Cui, G. **Yang**, A. Veit, X. Huang, and S. Belongie. "Learning to evaluate image captioning". In: *CVPR* (2018).

[Yan+18] G. **Yang**, Y. Cui, S. Belongie, and B. Hariharan. "Learning single-view 3d reconstruction with limited pose supervision". In: *ECCV* (2018).

Workshop Papers

[Pan+25] Z. Pan, B. Pan, G. **Yang**, A. W. Harley, and L. Guibas. "Animal Pose Labeling Using General-Purpose Point Trackers". In: *CVPR 2025 CV4Animals Workshop* ***(Oral)*** (2025).

[Hua+24b] J. Huang, G. **Yang**, Z. Wang, and J. J. Park. "DiffusionPDE: Generative PDE-Solving Under Partial Observation". In: *ICML AI for Science Workshop* ***(Oral)*** (2024).

[Yan+23] G. **Yang**, A. Kundu, L. J. Guibas, J. T. Barron, and B. Poole. "Learning a diffusion prior for nerfs". In: *ICLR Workshops* (2023).

[She+22] F. Y. Shen, K. Luo, G. **Yang**, H. Haraldsson, and S. Belongie. "Residual Aligned: Gradient Optimization for Non-Negative Image Synthesis". In: *CVPR Workshops* (2022).

[Zha+19] T. Zhang, Z. Lin, G. **Yang**, and C. De Sa. "Qpytorch: A low-precision arithmetic simulation framework". In: *NeurIPS Workshops (EMC2-NIPS)* (2019).

[YMB19] G. **Yang**, T. Malisiewicz, and S. Belongie. "Learning Data-Adaptive Interest Points through Epipolar Adaptation." In: *CVPR Workshops* (2019).

[Pou+18] O. Poursaeed*, G. **Yang***, A. Prakash*, Q. Fang, H. Jiang, B. Hariharan, and S. Belongie. "Deep fundamental matrix estimation without correspondences". In: *ECCV Workshops* (2018).

Preprints

[Ack+25] J. Ackermann, K. Nakayama, G. **Yang**, T. Wu, and G. Wetzstein. "Towards Vision-Language-Garment Models for Web Knowledge Garment Understanding and Generation". In: *arXiv preprint arXiv:2506.05210* (2025).

[Wu+17] F. Wu, N. Lao, J. Blitzer, G. **Yang**, and K. Weinberger. "Fast reading comprehension with convnets". In: *arXiv preprint* (2017).

* denotes equal contribution.

TEACHING

Instructor — Fall 2026
Advanced Topics in Computer Vision (ECE 381V, University of Texas at Austin)

Teaching Assitant, Guest Lecturer

- Geometric and Topological Data Analysis (CS 233, Stanford) — Winter 2024
- Applied Machine Learning (CS 5785, Cornell) — Fall 2022
- Machine Learning Hardware and Systems (ECE 5545, Cornell) — Spring 2022
- Machine Learning Hardware and Systems (ECE 5545, Cornell) — Spring 2022
- Applied Machine Learning (CS 5785, Cornell) — Fall 2019
- Computer Vision (CS 6670, Cornell) — Fall 2018
- Machine Learning for Intelligent Systems (CS 4780, Cornell) — Spring 2018
- Machine Learning for Intelligent Systems (CS 4780, Cornell) — Fall 2017
- Data Structures and Functional Programming (CS 3110, Cornell) — Fall 2016
- Intermediate iPhone Development (CS 2049, Cornell) — Spring 2016
- Data Structures and Functional Programming (CS 3110, Cornell) — Fall 2015
- Introduction to iPhone and Apple Watch Development (CS 2048, Cornell) — Fall 2015

INVITED TALKS

Transformers beyond Languages and Vision — May - August 2026
Invited talk at Caltech, UCSD Pixel Cafe Seminar.

Toward Spatial Intelligence with Limited Data — Jan 2025 - May 2026
Invited talks in Stanford, CMU, Cornell, UPenn, NYU, UC Irvine, UCSC, and UT Austin.

Shapes as Fields: Toward Geometry Processing without Discretization [Slides] — October 2024
Invited lecture in University of Pennsylvania
CIS 7000: Introduction to Neural Scene Representation and Neural Rendering

A Gentle Introduction to Visual AI [Slides] — October 2024
Invited lecture in Stanford *COMM 278A: Artificial Intelligence (AI) and Journalism*

Survey of Large Language Models and Large Vision Models [Slides] — September 2024
Invited lecture in Stanford *CS 468: Topics in Geometric Computing - 3D and 4D Foundation Models*

Evaluating 3D Shapes for Digital and Physical Applications [Slides] — March 2024
Invited talk at UIUC Vision Seminar

Detecting and Exploiting Symmetry and Regularity in 3D Geometry — March 2024
Guest lecture in Stanford *CS 233: Geometric and Topological Data Analysis*

Neural Monte Carlo PDE Solvers [Slides] October 2023
Invited spotlight talk at Michigan AI Symposium Rising Star 2023

Deep Learning for Geometric Data Processing [Link] December 2022
Invited talk at the CS Student Colloquium at Cornell

Geometry Processing with Discretization-Free Representation and Prior [Link] May 2022
Invited talk at the Pioneer Center for AI and the University of Copenhagen.

Geometry Processing with Neural Fields [Video] March 2022
Invited talk at the Learning on Graphs and Geometry Reading Group

Learning Single-view 3D Reconstruction with Limited Pose Supervision June 2019
Invited talk In the 2019 Scene Understanding and Modeling (SUMO) Workshop (CVPRW).

PROFESSIONAL ACTIVITIES

Program Chairs:

- ECCV 2026: Publicity and Social Media Co-chair.

Area Chair:

- Machine Learning: ICLR 2026, ICML 2026, NeurIPS 2026.
- Computer Graphics: SIGGRAPH 2025 TPC; EuroGraphics 2027 TPC.

Workshop Organizer:

- Organizer for First Agentic Graphics Workshop at SIGGRAPH Asia 2026.
- Co-organizer for CV4ARVR Workshops 2019-2022.

Reviewer:

- Computer Vision: CVPR, ICCV, ECCV, IJCV.
- Machine Learning: NeurIPS, ICLR, ICML.
- Computer Graphics: SIGGRAPH, SIGGRAPH Asia, TOG Journal, EuropeGraphics.

HONORS

Fellow of the AMD Chair in Computer Engineering 2026

NVIDIA Graduate Fellowship Finalist 2021

Cornell University Arts and Sciences Magna Cum Laude 2018

Cornell University Arts and Sciences Dean's List 2014-2017