

DANIEL RITCHIE

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EDUCATION	Stanford University PhD, Computer Science Dissertation: <i>Probabilistic Programming for Procedural Modeling and Design</i> Advisors: Pat Hanrahan, Noah Goodman Conferred September 2016	
	Stanford University MS, Computer Science Conferred April 2013	
	University of California Berkeley BA, Computer Science Conferred May 2010	
EMPLOYMENT	Associate Professor Brown University Computer Science Department	Providence, RI 2024 – Present
	Eliot Horowitz Assistant Professor Brown University Computer Science Department	Providence, RI 2021 – 2024
	Assistant Professor Brown University Computer Science Department	Providence, RI 2017 – 2021
	Postdoctoral Researcher Stanford University Computer Science Department	Stanford, CA 2016 – 2017
	Research Intern Adobe Creative Technologies Lab	San Francisco, CA Summer 2011
	Graduate Research Assistant Stanford University Computer Science Department	Stanford, CA 2010 – 2016
	Technical Director Intern Pixar Animation Studios	Emeryville, CA Summer 2009
	Software Intern Hewlett-Packard	Roseville, CA Summer 2008

REFEREED PUBLICATIONS All publications listed below follow the author order conventions for visual computing (e.g. graphics, vision, machine learning): the first author is the primary implementer (typically a PhD student), and the last author is typically the direct supervisor of the first author and the principal investigator on the project. Middle authors vary in role, with students and interns typically listed before faculty and senior research scientists.

Annotation scheme for publications started while employed at Brown University (July 2017 onwards):

- **Blue bold text**: PhD student at Brown.
- **Purple bold text**: undergraduate or masters student at Brown.

- **Green bold text**: external PhD student whom Daniel mentored.
- **Orange bold text**: external undergraduate or masters student whom Daniel mentored.

R3DS: Reality-linked 3D Scenes for Panoramic Scene Understanding. **Qirui Wu, Sonia Raychaudhuri**, Daniel Ritchie, Manolis Savva, Angel X. Chang. *ECCV 2024*.

One Noise to Rule Them All: Learning a Unified Model of Spatially-Varying Noise Patterns. **Arman Maesumi, Dylan Hu, Krishi Saripalli**, Vladimir Kim, Matthew Fisher, Sören Pirk, Daniel Ritchie. *SIGGRAPH 2024*.

Learning to Infer Generative Template Programs for Visual Concepts. **R. Kenny Jones**, Siddhartha Chaudhuri, Daniel Ritchie. *ICML 2024*.

CharacterMixer: Rig-Aware Interpolation of 3D Characters. **Xiao Zhan, Rao Fu**, Daniel Ritchie. *Eurographics 2024*.

PossibleImpossibles: Exploratory Procedural Design of Impossible Structures. **Yuanbo Li, Tianyi Ma, Zaineb Aljumayaat**, Daniel Ritchie. *Eurographics 2024*.

Generalizing Single-View 3D Shape Retrieval to Occlusions and Unseen Objects. **Qirui Wu**, Daniel Ritchie, Manolis Savva, Angel X. Chang. *International Conference on 3D Vision (3DV) 2024*.

Editing Motion Graphics Videos via Motion Vectorization & Transformation. **Sharon Zhang, Jiaju Ma**, Daniel Ritchie, Jiajun Wu, Maneesh Agrawala. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia) 2023*.

Explorable Mesh Deformation Subspaces from Unstructured 3D Generative Models. **Arman Maesumi**, Paul Guerrero, Vladimir Kim, Matthew Fisher, Siddhartha Chaudhuri, Noam Aigerman, Daniel Ritchie. *SIGGRAPH Asia 2023*.

Improving Unsupervised Visual Program Inference with Code Rewriting Families. **Aditya Ganeshan, R. Kenny Jones**, Daniel Ritchie. *ICCV 2023*.

ShapeCoder: Discovering Abstractions for Visual Programs from Unstructured Primitives. **R. Kenny Jones**, Paul Guerrero, Niloy Mitra, Daniel Ritchie. *ACM Transactions on Graphics (Proceedings of SIGGRAPH) 2023*.

Neurosymbolic Models for Computer Graphics Daniel Ritchie, Paul Guerrero, **R. Kenny Jones**, Niloy Mitra, Adriana Schulz, Karl D. D. Willis, Jiajun Wu *Eurographics 2023 State-of-the-Art Report*.

CLIP-Sculptor: Zero-Shot Generation of High-Fidelity and Diverse Shapes from Natural Language Aditya Sanghi, **Rao Fu**, Vivian Liu, Karl D.D. Willis, Hooman Shayani, Amir Hosein Khasahmadi, Srinath Sridhar, Daniel Ritchie *CVPR 2023*.

Unsupervised 3D Shape Reconstruction by Part Retrieval and Assembly. **Xianghao Xu**, Paul Guerrero, Matthew Fisher, Siddhartha Chaudhuri, Daniel Ritchie. *CVPR 2023*.

ShapeCrafter: A Recursive Text-Conditioned 3D Shape Generation Model
Rao Fu, Xiao Zhan, Yiwen Chen, Daniel Ritchie, Srinath Sridhar *NeurIPS 2022*.

SHRED: 3D Shape Region Decomposition with Learned Local Operations.
R. Kenny Jones, Aalia Habib, Daniel Ritchie. *SIGGRAPH Asia 2022*.

The Shape Part Slot Machine: Contact-based Reasoning for Generating 3D Shapes from Parts. Kai Wang, Srinath Sridhar, Paul Guerrero, Vladimir Kim, Siddhartha Chaudhuri, Minhyuk Sung, Daniel Ritchie. *ECCV 2022*.

Unsupervised Kinematic Motion Detection for Part-segmented 3D Shape Collections. Xianghao Xu, Yifan Ruan, Srinath Sridhar, Daniel Ritchie. *SIGGRAPH 2022*.

The Neurally-Guided Shape Parser: Grammar-based Labeling of 3D Shape Regions with Approximate Inference. R. Kenny Jones, Aalia Habib, Rana Hanocka, Daniel Ritchie. *CVPR 2022*.

PLAD: Learning to Infer Shape Programs with Pseudo-Labels and Approximate Distributions. R. Kenny Jones, Homer Walke, Daniel Ritchie. *CVPR 2022*.

Learning to Infer Kinematic Hierarchies for Novel Object Instances. Hameed Abdul-Rashid, Miles Freeman, Ben Abbatematteo, George Konidaris, Daniel Ritchie. *ICRA 2022*.

Roominoes: Generating Novel 3D Floor Plans From Existing 3D Rooms. Kai Wang, Xianghao Xu, Leon Lei, Natalie Lindsay, Selena Ling, Angel X. Chang, Manolis Savva, Daniel Ritchie. *Symposium on Geometry Processing (SGP) 2021*.

ShapeMOD: Macro Operation Discovery for 3D Shape Programs. R. Kenny Jones, David Charatan, Paul Guerrero, Niloy Mitra, Daniel Ritchie. *ACM Transactions on Graphics (Proceedings of SIGGRAPH) 2021*.

Inferring CAD Modeling Sequences using Zone Graphs. Xianghao Xu, Wenzhe Peng, Chin-Yi Cheng, Karl D. D. Willis, Daniel Ritchie. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2021*.

Motion Annotation Programs: A Scalable Approach to Annotating Kinematic Articulations in Large 3D Shape Collections. Xianghao Xu, David Charatan, Sonia Raychaudhuri, Hanxiao Jiang, Mae Heitmann, Vladimir Kim, Siddhartha Chaudhuri, Manolis Savva, Angel X. Chang, Daniel Ritchie. *International Conference on 3D Vision (3DV) 2020*.

Shape from Tracing: Towards Reconstructing 3D Object Geometry and SVBRDF Material from Images via Differentiable Path Tracing. Purvi Goel, Loudon Cohen, James Guesman, Vikas Thamizharasan, James Tompkin, Daniel Ritchie. *International Conference on 3D Vision (3DV) 2020*.

ShapeAssembly: Learning to Generate Programs for 3D Shape Structure Synthesis. R. Kenny Jones, Theresa Barton, Xianghao Xu, Kai Wang, Ellen Jiang, Paul Guerrero, Niloy Mitra, Daniel Ritchie. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia) 2020*.

GANHopper: Multi-Hop GAN for Unsupervised Image-to-Image Translation. Wallace Lira, Johannes Merz, Daniel Ritchie, Daniel Cohen-Or, Hao Zhang. *European Conference on Computer Vision (ECCV) 2020*.

Learning Generative Models of 3D Structures. Siddhartha Chaudhuri, Daniel Ritchie, Jiajun Wu, Kai Xu, Hao Zhang. *Eurographics 2020 State-of-the-Art Report*.

Learning Style Compatibility Between Objects in a Real-World 3D Asset Database. Yifan Liu, Ruolan Tang, Daniel Ritchie. *Pacific Graphics 2019*.

PlanIT: Planning and Instantiating Indoor Scenes with Relation Graph and Spatial Prior Networks. Kai Wang, Yu-an Lin, Ben Weissmann, Manolis Savva, Angel X. Chang, Daniel Ritchie. *ACM Transactions on Graphics (Proceedings of SIGGRAPH) 2019*.

Fast and Flexible Indoor Scene Synthesis via Deep Convolutional Generative Models. Daniel Ritchie, Kai Wang, Yu-an Lin. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2019*.

Learning to Describe Scenes with Programs. Yunchao Liu, Zheng Wu, Daniel Ritchie, William T. Freeman, Joshua B. Tenenbaum, Jiajun Wu. *International Conference on Learning Representations (ICLR) 2019*.

Learning to Infer Graphics Programs from Hand-Drawn Images. Kevin Ellis, Daniel Ritchie, Armando Solar-Lezama, Joshua B. Tenenbaum. *Conference on Neural Information Processing Systems (NeurIPS) 2018*. SPOTLIGHT PRESENTATION.

Improving Shape Deformation in Unsupervised Image-to-Image Translation Aaron Gokaslan, Vivek Ramanujan, Daniel Ritchie, Kwang In Kim, James Tompkin. *European Conference on Computer Vision (ECCV) 2018*.

Deep Convolutional Priors for Indoor Scene Synthesis Kai Wang, Manolis Savva, Angel X. Chang, Daniel Ritchie. *ACM Transactions on Graphics (Proceedings of SIGGRAPH) 2018*.

ScanComplete: Large-Scale Scene Completion and Semantic Segmentation for 3D Scans Angela Dai, Daniel Ritchie, Martin Bokeloh, Scott Reed, Jürgen Sturm, Matthias Nießner. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2018*.

Example-based Authoring of Procedural Modeling Programs with Structural and Continuous Variability Daniel Ritchie, Sarah Jobalia, Anna Thomas *Proceedings of Eurographics 2018*.

An Improved Training Procedure for Neural Autoregressive Data Completion. Maxime Voisin, Daniel Ritchie. *NIPS 2017 Bayesian Deep Learning Workshop*.

Neurally-Guided Procedural Models: Amortized Inference for Procedural Graphics Programs using Neural Networks. Daniel Ritchie, Anna Thomas, Pat Hanrahan, Noah D. Goodman. *Conference on Neural Information Processing Systems (NIPS) 2016*.

C3: Lightweight Incrementalized MCMC for Probabilistic Programs using Continuations and Callsite Caching. Daniel Ritchie, Andreas Stuhlmüller,

Noah D. Goodman. *International Conference on Artificial Intelligence and Statistics (AISTATS) 2016*.

Controlling Procedural Modeling Programs with Stochastically-Ordered Sequential Monte Carlo. Daniel Ritchie, Ben Mildenhall, Noah D. Goodman, and Pat Hanrahan. *ACM Transactions on Graphics (Proceedings of SIGGRAPH) 2015*.

Generating Design Suggestions under Tight Constraints with Gradient-based Probabilistic Programming. Daniel Ritchie, Sharon Lin, Noah D. Goodman, and Pat Hanrahan. *Proceedings of Eurographics 2015*. BEST PAPER HONORABLE MENTION.

Quicksand: A Lightweight Embedding of Probabilistic Programming for Procedural Modeling and Design. Daniel Ritchie. *The 3rd NIPS Workshop on Probabilistic Programming, 2014*.

First-class Runtime Generation of High-performance Types using Exotypes. Zach Devito, Daniel Ritchie, Matthew Fisher, Alex Aiken, and Pat Hanrahan. *Programming Language Design and Implementation (PLDI) 2014*.

Probabilistic Color-by-Numbers: Suggesting Pattern Colorizations Using Factor Graphs. Sharon Lin, Daniel Ritchie, Matthew Fisher, and Pat Hanrahan. *ACM Transactions on Graphics (Proceedings of SIGGRAPH) 2013*.

Example-based Synthesis of 3D Object Arrangements. Matthew Fisher, Daniel Ritchie, Manolis Savva, Thomas Funkhouser, and Pat Hanrahan. *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia) 2012*.

d.tour: Style-based Exploration of Design Example Galleries. Daniel Ritchie, Ankita Arvind Kejriwal, and Scott R. Klemmer. *ACM Symposium on User Interface Software and Technology (UIST) 2011*.

Dynamic Local Remeshing for Elastoplastic Simulation. Martin Wicke, Daniel Ritchie, Bryan M. Klingner, Sebastian Burke, Jonathan R. Shewchuk, and James F. O'Brien. *ACM Transactions on Graphics (Proceedings of SIGGRAPH) 2010*.

Interactive Simulation of Surgical Needle Insertion and Steering. Nuttapon Chentanez, Ron Alterovitz, Daniel Ritchie, Lita Cho, Kris K. Hauser, Ken Goldberg, Jonathan R. Shewchuk, and James F. O'Brien. *ACM Transactions on Graphics (Proceedings of SIGGRAPH) 2009*.

TECHNICAL REPORTS

Open-Universe Indoor Scene Generation using LLM Program Synthesis and Uncurated Object Databases. [Rio Aguina-Kang](#), [Maxim Gumin](#), [Do Heon Han](#), [Stewart Morris](#), [Seung Jean Yoo](#), [Aditya Ganeshan](#), [R. Kenny Jones](#), [Qihong Anna Wei](#), Kailiang Fu, Daniel Ritchie. *arXiv:2403.09675, 2024*.

Learning Body-Aware 3D Shape Generative Models. [Bryce Blinn](#), [Alexander Ding](#), [R. Kenny Jones](#), Manolis Savva, Srinath Sridhar, Daniel Ritchie. *arXiv:2112.07022, 2021*.

Deep Amortized Inference for Probabilistic Programs. Daniel Ritchie, Paul Horsfall, Noah D. Goodman. *arXiv:1610.05735, 2016*.

**INVITED
TALKS**

- Deep Learning for 3D Geometry**
Symposium on Geometry Processing, *Graduate School* June 2024
- Neurosymbolic Models for 3D Content Creation**
ICCV, *AI for 3D Content Creation Workshop* October 2023
- Inferring Programs for 3D Shapes without Supervision**
ICCV, *SHARP Workshop - Solving CAD History and pArameters Recovery from Point clouds and 3D scans* October 2023
- Neurosymbolic Models for 3D Generative AI**
ICML, *The Role of Generative AI in Shaping the Next Generation of the Metaverse* July 2023
- Learning to Represent Shapes as Programs**
Symposium on Geometry Processing, *Graduate School* July 2022
- Programs as Representations for Inferring and Generating 3D Structures**
Cornell University, *Graphics/Vision Seminar* March 2022
- Conversations with Research Pioneers: Daniel Ritchie**
Unity Technologies, *Conversations with Research Pioneers* December 2021
- AI-assisted 3D Content Creation: Successes, Challenges, & Opportunities**
Roblox, *Research Colloquium* December 2021
- Learning to Infer and Generate Programs for 3D Shapes and Scenes**
ICCV, *Holistic Structures for 3D Vision Workshop* October 2021
ICCV, *Structural and Compositional Learning on 3D Data Workshop* October 2021
- Neurosymbolic Generative Models for Structured 3D Content**
3DGV, *3D Geometry and Vision Seminar* February 2021
- Learning Neurosymbolic 3D Models**
PROBPROG, *International Conference on Probabilistic Programming* March 2020
- Everything You Need to Know About Deep Fakes**
Full Stack at Brown, *Hack@Home* October 2020
- Neurosymbolic 3D Models: Learning to Generate 3D Shape Programs**
GAMES, *Graphics and Mixed Environment Seminar* August 2020
- Toward Synthesizing Training Data for 3D Scene Understanding**
CVPR, *3D Scene Understanding Workshop* June 2020
- From Neural to Neurosymbolic 3D Modeling**
CVPR, *Neurosymbolic Visual Learning & Program Induction Workshop* June 2020
- Neurosymbolic 3D Models**
MIT, *Vision Seminar* March 2020
- Learning to Generate 3D Structures**
Brown Department of Biostatistics, *Deep Learning Seminar* February 2020

Deep Learning for Graph(ic)s Simon Fraser University, <i>Visual Computing Group</i>	December 2019
Learning to Generate Visual Structures Carney Institute for Brain Science, <i>Lunch Seminar</i>	October 2019
Indoor Scene Synthesis: Past, Present, and Future Shenzhen University, <i>Visual Computing Summer School</i>	July 2019
Probabilistic Programming Brown ICERM, <i>Computer Vision Semester Program</i>	February 2019
Virtual Indoor Scene Synthesis: Past, Present, and Future MIT, <i>Graphics Lunch</i>	December 2018
Toward Style-Aware Generative Models of Virtual Indoor Scenes Wayfair LLC, <i>Computer Vision / Data Science Team</i>	December 2018
Visual Program Induction Brown Applied Math, <i>Pattern Theory Seminar</i>	November 2018
Probabilistic Programming for Computer Graphics MIT, <i>PROBPROG 2018</i>	October 2018
Learning Procedural Modeling Programs from Examples MIT, <i>New England Symposium on Graphics</i>	April 2018
Microsoft Research Cambridge, <i>New England Machine Learning Day</i>	May 2018
Learning from Large-Scale Synthetic 3D Scene Data Brown University Data Science Initiative, <i>Datathon</i>	March 2018
Inferring Graphics Programs University of Washington, <i>ML+PL Workshop</i>	February 2018
Learning and Inferring Graphics Programs MIT, <i>Vision Seminar</i>	September 2017
Creative AI for Computer Graphics (It's More Than Just Style Transfer) Google Brain, <i>Magenta Group</i>	January 2017
Probabilistic Programming for Procedural Modeling and Design Adobe Systems, <i>Creative Technologies Lab</i>	March 2016
Brown University, <i>Computer Science Department</i>	February 2016
Harvey Mudd College, <i>Computer Science Department</i>	February 2016
Yale University, <i>Computer Science Department</i>	February 2016

PANELIST Seminar #3: Visual Reasoning. *COGGRAPH 2024*.

Advances in Software for Approximate Bayesian Inference. *NIPS 2016 Workshop on Advances in Approximate Bayesian Inference*.

TUTORIALS & WORKSHOPS **Mentoring PhD Students in Computer Graphics** July 2024
Daniel Ritchie

SIGGRAPH 2024 Birds of a Feather

3D Vision and Modeling Challenges in eCommerce October 2023
Angel Chang, Jasmine Collins, Huan Fu, Francesca Gil-Ureta, Erhan Gundogdu, Yiming Qian, Daniel Ritchie, Javier Romero, Jian Wang, Fenggen Yu, Xu Zhang
ICCV 2023 Workshop

Learning to Generate 3D Shapes and Scenes October 2022
Kai Wang, Akshay Gadi Patil, Angel X. Chang, Paul Guerrero, Daniel Ritchie, Manolis Savva
ECCV 2022 Workshop

Machine Learning in Computational Design September 2022
Andrew Spielberg, Caitlin Mueller, Lydian Chilton, Rafael Gomez-Bombarelli, Vladimir Kim, Daniel Ritchie
ICML 2022 Workshop

Learning to Generate 3D Shapes and Scenes June 2021
Manyi Li, Zhenpei Yang, Angel X. Chang, Siddhartha Chaudhuri, Daniel Ritchie, Manolis Savva
CVPR 2021 Workshop

Synthetic 3D Scene Datasets: Needs & Opportunities August 2020
Daniel Ritchie, Angel Chang, Manolis Savva
SIGGRAPH 2020 Birds of a Feather

Learning 3D Generative Models June 2020
Daniel Ritchie, Florian Golemo, Angel Chang, Siddhartha Chaudhuri, Aaron Courville, Qixing Huang, Derek Nowrouzezahrai, Pedro O. Pinheiro, Sai Rajeswar, Manolis Savva, David Vasquez, Kai Xu, Hao Zhang
CVPR 2020 Workshop

3D Scene Generation June 2019
Angel Chang, Qixing Huang, Daniel Ritchie, Manolis Savva
CVPR 2019 Workshop

Learning Generative Models of 3D Structures May 2019
Siddhartha Chaudhuri, Daniel Ritchie, Kai Xu, Hao Zhang
Eurographics 2019 Tutorial

TEACHING

Instructor Fall 2021 – 2024
Brown CSCI 1230: Introduction to Computer Graphics

Instructor Fall 2018 – 2020
Brown CSCI 1470/2470: Deep Learning

Instructor Spring 2018 – 2024
Brown CSCI 2240: Advanced Computer Graphics

Instructor Fall 2017
Brown CSCI 2951-W: Creative Artificial Intelligence for Computer Graphics

Instructor Summer 2016
DARPA Probabilistic Programming for Advanced Machine Learning Summer School

Course Assistant Spring 2014
Stanford CS 348b: Image Synthesis Techniques

Course Assistant Fall 2011
Stanford CS 148: Introduction to Computer Graphics and Imaging

Graduate Student Instructor Fall 2009, Spring 2010
UC Berkeley CS 184: Foundations of Computer Graphics

Student Facilitator Spring 2009 – Spring 2010
UC Berkeley Undergraduate Graphics Group

Tutor Fall 2008
UC Berkeley Self-Paced Center

**RESEARCH
MENTORING**

Current Students

Russell (Kenny) Jones Brown CS PhD

Xianghao Xu Brown CS PhD

Aditya Ganeshan Brown CS PhD

Arman Maesumi Brown CS PhD

Maxim Gumin Brown CS PhD

Yuanbo Li Brown CS PhD

Zihan Zhu Brown CS ScM (expected 2025)

Junyu Liu Brown CS ScM (expected 2025)

Ruiqi (Ray) Xu Brown CS ScM (expected 2025)

Krishi Saripalli Brown CS Undergrad (expected 2024)

Jay Sarva Brown CS Undergrad (expected 2024)

Sarah Roberts Brown CS Undergrad (expected 2024)

Do Heon (Bryan) Han Brown CS Undergrad (expected 2025)

Stewart Morris Brown CS Undergrad (expected 2025)

Zack Amiton Brown CS Undergrad (expected 2025)

Jean Yoo Brown CS Undergrad (expected 2025)

Ryan Huang Brown CS Undergrad (expected 2026)

Nirayka Monga Brown CS Undergrad (expected 2026)

Tanish Makadia Brown CS Undergrad (expected 2026)

Alumni

Kai Wang Brown CS PhD 2023
Next position: Postdoc, Amazon

Anh Truong Brown CS Undergrad 2024
Next position: PhD Student, MIT

Renhao (Norman) Zhang Brown CS ScM 2024
Next position: PhD Student, UMass Amherst

Alex Ding Brown CS Undergrad + ScM 2024
Next position: Jane Street

Neil Xu Brown CS Undergrad 2024
Next position: Gecko Robotics

Alex Wang Brown CS Undergrad 2024
Next position: ScM Student, Brown University

Cal Nightingale Brown CS Undergrad 2024
Next position: Gradient Health

Coco Kaleel Brown CS Undergrad 2024
Next position: Analog Devices

Chloe Yeh Brown CS Undergrad 2024
Next position: InterSystems

Yifan Ruan Brown CS Undergrad 2023
Next position: PhD Student, University of Toronto

Xiao (Sean) Zhan Brown CS Undergrad 2023
Next position: PhD Student, MIT

Paul Biberstein Brown CS Undergrad 2023
Next position: PhD Student, UPenn

Adrian Chang Brown CS Undergrad 2023
Next position: Vision Systems, Inc.

David Han Brown CS Undergrad 2023
Next position: Roblox

Alana White Brown CS Undergrad 2023
Next position: Netflix

Adam Wang Brown CS Undergrad 2023
Next position: Five Rings

Bryce Blinn <i>Next position: PhD Student, USC</i>	Brown CS Undergrad + ScM 2022
Yuchen Zhou <i>Next position: Amazon</i>	Brown CS ScM 2022
Zhouqi Gong <i>Next position: Amazon</i>	Brown CS ScM 2022
Joshua Pierce <i>Next position:</i>	Brown CS ScM 2022
Caleb Trotz <i>Next position: Goldman Sachs</i>	Brown CS Undergrad 2022
Aalia Habib <i>Next position: Adobe</i>	Brown CS Undergrad 2022
Vikas Thamizharasan <i>Next position: R&D Engineer, Activision</i>	Brown CS ScM 2022
Xiangyu Li <i>Next position:</i>	Brown CS ScM 2021
Selena Ling <i>Next position: PhD Student, University of Toronto</i>	Brown CS ScM 2021
David Charatan <i>Next position: Common Sense Machines</i>	Brown CS Undergrad 2021
Andrew Peterson <i>Next position: Disney Animation</i>	Brown CS Undergrad + ScM 2021
Maggie Wu <i>Next position: Microsoft</i>	Brown CS Undergrad 2021
Homer Walke <i>Next position: PhD Student, UC Berkeley</i>	Brown CS Undergrad 2021
Theresa Barton <i>Next position: The New York Times</i>	Brown CS ScM 2021
Naveen Srinivasan <i>Next position: Amazon Lab126</i>	Brown CS Undergrad 2020
Brian Oppenheim <i>Next position: Google</i>	Brown CS Undergrad 2020
Brad Guesman <i>Next position: NVIDIA</i>	Brown CS Undergrad 2020
Miles Freeman <i>Next position: Winnie</i>	Brown CS Undergrad 2020

Siqi Wang Brown CS ScM 2020
Next position: PhD Student, Boston University

Loudon Cohen Brown CS Undergrad + ScM 2020
Next position: NVIDIA

Purvi Goel Brown CS Undergrad + ScM 2020
Next position: PhD Student, Stanford University

Natalie Lindsay Brown CS Undergrad + ScM 2020
Next position: Apple

Leon Lei Brown CS Undergrad + ScM 2020
Next position: Amazon

Ellen Jiang Brown CS Undergrad 2020
Next position: Google Brain

Ruolan Tang Brown CS ScM 2019
Next position: Two Sigma

Ben Weissmann Brown CS Undergrad 2019
Next position: Down Dog

Mae Heitmann Brown CS Undergrad 2019
Next position: AirBnB

Montana Fowler Brown CS Undergrad 2019
Next position: PhD Student, UC Santa Cruz

Yu-An (Andy) Lin Brown ECE ScM 2018
Next position: Microsoft

Yifan Liu Brown CS ScM 2018
Next position: Google

Shreya Shankar Stanford CS Undergrad 2019
Next position: Machine Learning Engineer, Viaduct

Maxime Voisin Stanford MS&E MS 2018
Next position: Research Assistant, Stanford University

Anna Thomas Stanford CS Undergrad 2018
Next position: Masters Student, University of Cambridge (Churchill Scholar)

Sarah Jobalia Stanford CS MS 2018
Next position: Microsoft

Ben Mildenhall Stanford CS Undergrad 2015
Next position: PhD Student, UC Berkeley

Visitors

Clara Fee Visiting Undergraduate Researcher Summer 2024
Home institution: Bryn Mawr College

Caitlin Gong Visiting Undergraduate Researcher Summer 2024
Home institution: Vassar College

Rio Aguina-Kang Visiting Undergraduate Researcher Summer 2023
Home institution: UCSD

Imani Finkley Visiting Undergraduate Researcher Summer 2022
Home institution: Cornell University

Hameed Abdul-Rashid Visiting Undergraduate Researcher Summer 2019
Home institution: University of Southern Mississippi

External Thesis Committees

Wenzhe Peng 2022
MIT Department of Architecture

FUNDING

Roblox Corporation 2024 – 2024
Unrestricted Gifts
Sole PI. \$60,000

Adobe Inc. 2020 – 2024
Unrestricted Gifts
Sole PI. \$154,000

Google exploreCSR 2024 – 2027
Unrestricted Gift
Co-PI: Malte Schwarzkopf. \$32,000

NSF CISE-ANR HCC Small #2315354 10/2023 - 09/2026
Learning to Translate Freehand Design Drawings into Parametric CAD Programs
Co-PI: Adrien Bousseau (INRIA). \$599,999

NSF REU Site #2150184 03/2022 – 02/2025
Artificial Intelligence for Computational Creativity
Sole PI. \$313,000

Google exploreCSR 2021 – 2023
Unrestricted Gift
Co-PIs: James Tompkin, Jeff Huang, Amy Greenwald. \$18,000

Autodesk Inc. 2020 – 2024
Unrestricted Gifts
Sole PI. \$170,000

NSF CCRI Planning #2016532 10/2020 – 03/2024
A Community-Standard, Large-Scale Synthetic 3D Scene Dataset for Scene Analysis and Synthesis
Sole PI. \$50,000

NSF CAREER #1941808 04/2020 – 03/2025
 Learning Neurosymbolic 3D Models
 Sole PI. \$549,999

NSF CHS Small #1907547 10/2019 – 06/2024
 Learning to Automatically Design Interior Spaces
 Sole PI. \$498,333

DARPA GAILA HR00111990064 07/2019 – 12/2020
 Cognitively-Motivated Word Learning in Embodied Virtual Agents
 Co-PIs: Ellie Pavlick, Roman Fieinan, Stefanie Tellex, Carsten Eickhoff. \$954,509

Brown University OVPR Research Seed Fund Award 2019
 Building a Large Dataset of Articulated 3D Object Models
 Sole PI. \$42,500

NSF CRII #1753684 05/2018 – 04/2021
 Learning Procedural Modeling Programs for Computer Graphics from Examples
 Sole PI. \$175,000

AWARDS & HONORS

Eliot Horowitz Assistant Professorship	2021
NSF CAREER Award	2020
Eurographics Best Paper Honorable Mention	2015
Stanford Graduate Fellowship	2010
UC Berkeley EECS Departmental Citation	2010
UC Berkeley Computer Science Highest Achievement Award	2010
CRA Outstanding Undergraduate Researcher Honorable Mention	2010
UC Berkeley Edward Frank Kraft Scholarship	2007

PROFESSIONAL SERVICE **Program Committee Member / Area Chair**

SIGGRAPH: 2021, 2022
 SIGGRAPH Asia: 2018, 2019, 2023, 2024
 SIGGRAPH Asia Courses: 2020
 NeurIPS: 2019
 ICLR: 2021, 2023
 Eurographics: 2020 – 2024
 Eurographics State-of-the-Art Reports: 2025

Conflict of Interest Coordinator

SIGGRAPH Asia: 2020

Conference Proceedings Reviewer

SIGGRAPH: 2016 – 2024
 SIGGRAPH Asia: 2016 – 2024
 CVPR: 2019 – 2024
 UIST: 2016
 NeurIPS: 2016, 2018, 2019
 Eurographics: 2017 – 2019
 Graphics Interface: 2019
 ICCV: 2019, 2021
 ECCV: 2020
 ICML: 2018
 ICLR: 2018

Journal Editor

Computer Graphics Forum (Associate Editor): 2021 – 2024

IEEE TVCG (Associate Editor): 2023 – 2024

Journal Reviewer

ACM TOG: 2019, 2022

IEEE TVCG: 2016, 2019, 2021

Computer Graphics Forum: 2017, 2020, 2022

Pattern Recognition: 2019

Computer Aided Design: 2016

Transactions on Games: 2020

IEEE TPAMI: 2022

Grant Reviewer

NSF Proposal Reviewer: 2018, 2020, 2021

Other Reviews

SIGGRAPH Thesis Fast Forward: 2024

DEPARTMENT SERVICE	PhD Admissions Committee Member	2017 – 2024
	Diversity & Inclusion Committee Chair	2021 – 2023
	Diversity & Inclusion Committee Member	2021 –
	Faculty Search Chair	2023 – 2024
PATENTS	Methods and Apparatus for Comic Creation (US 20130073952 A1)	
FILM CREDITS	Day & Night	2010
	Pixar Animation Studios	
	<i>Shading Technical Director</i>	