RUNDI WU

rundi.wu@columbia.edu

`https://www.cs.columbia.edu/~rundi/`

EDUCATION

Columbia University, New York, U.S.   2020.09 - 2025.05
PhD student, Department of Computer Science, School of Engineering and Applied Science
Advisor: Prof. Changxi Zheng
GPA: 4.22 / 4.33

Peking University, Beijing, China   2016.09 - 2020.07
B.S., Department of Computer Science, School of Electronic Engineering and Computer Science
Turing Class, an elite program
Advisor: Prof. Baoquan Chen
GPA: 3.67 / 4.00

WORK EXPERIENCE

Google DeepMind, San Francisco   2025.06 - now
Research Scientist

Google DeepMind, San Francisco   2024.05 - 2024.12
Student Researcher, working with Aleksander Holynski and Ben Poole

Google Research, San Francisco   2023.05 - 2023.08
Student Researcher, working with Ben Mildenhall and Aleksander Holynski

Tencent America, New York   2022.06 - 2022.08
Graphics Research Intern, working with Changxi Zheng and Ran Zhang

PUBLICATIONS

Spatiotemporally Consistent Indoor Lighting Estimation with Diffusion Priors
Mutian Tong, **Rundi Wu**, Changxi Zheng
SIGGRAPH 2025

CAT4D: Create Anything in 4D with Multi-View Video Diffusion Models
Rundi Wu, Ruiqi Gao, Ben Poole, Alex Trevithick, Changxi Zheng, Jonathan T. Barron, Aleksander Holynski
CVPR 2025 (Oral)

SimVS: Simulating World Inconsistencies for Robust View Synthesis
Alex Trevithick, Roni Paiss, Philipp Henzler, Dor Verbin, **Rundi Wu**, Hadi Alzayer, Ruiqi Gao, Ben Poole, Jonathan T. Barron, Aleksander Holynski, Ravi Ramamoorthi, Pratul P. Srinivasan
CVPR 2025

VLMaterial: Procedural Material Generation with Large Vision-Language Models
Beichen Li , **Rundi Wu**, Armando Solar-Lezama , Liang Shi , Changxi Zheng , Bernd Bickel , Wojciech Matusik
ICLR 2025 (Spotlight)

Generative Camera Dolly: Extreme Monocular Dynamic Novel View Synthesis
Basile Van Hoorick, **Rundi Wu**, Ege Ozguroglu, Kyle Sargent, Ruoshi Liu, Pavel Tokmakov, Achal Dave, Changxi Zheng, Carl Vondrick
ECCV 2024 (Oral)

PhysDreamer: Physics-Based Interaction with 3D Objects via Video Generation
Tianyuan Zhang, Hong-Xing ”Koven” Yu, **Rundi Wu**, Brandon Y. Feng, Changxi Zheng, Noah Snavely, Jiajun Wu, William T. Freeman
ECCV 2024 (Oral)

ReconFusion: 3D Reconstruction with Diffusion Priors
Rundi Wu*, *Ben Mildenhall*, Philipp Henzler, Keunhong Park, Ruiqi Gao, Daniel Watson, Pratul P. Srinivasan, Dor Verbin, Jonathan T. Barron, Ben Poole, Aleksander Holynski**
* Denotes equal contribution
CVPR 2024

Sin3DM: Learning a Diffusion Model from a Single 3D Textured Shape
Rundi Wu, *Ruoshi Liu, Carl Vondrick, Changxi Zheng*
ICLR 2024

Zero-1-to-3: Zero-shot One Image to 3D Object
Ruoshi Liu, **Rundi Wu**, *Basile Van Hoorick, Pavel Tokmakov, Sergey Zakharov, Carl Vondrick*
ICCV 2023

Implicit Neural Spatial Representations for Time-dependent PDEs
Honglin Chen*, **Rundi Wu***, Eitan Grinspun, Changxi Zheng, Peter Yichen Chen*
* Denotes equal contribution
ICML 2023

Learning to Generate 3D Shapes from a Single Example
Rundi Wu, *Changxi Zheng*
SIGGRAPH Asia 2022 (Journal Track)

Dynamic Sliding Window for Realtime Denoising Networks
Jinxu Xiang, Yuyang Zhu, **Rundi Wu**, *Ruilin Xu, Yuko Ishiwaka, Changxi Zheng*
ICASSP 2022

DeepCAD: A Deep Generative Network for Computer-Aided Design Models
Rundi Wu, *Chang Xiao, Changxi Zheng*
ICCV 2021

Listening to Sounds of Silence for Speech Denoising
Ruilin Xu, **Rundi Wu**, *Yuko Ishiwaka, Carl Vondrick, Changxi Zheng*
NeurIPS 2020

Multimodal Shape Completion via Conditional Generative Adversarial Networks
Rundi Wu*, Xuelin Chen*, Yixin Zhuang, Baoquan Chen*
* Denotes equal contribution
ECCV 2020 spotlight

PQ-NET: A Generative Part Seq2Seq Network for 3D Shapes
Rundi Wu, Yixin Zhuang, Kai Xu, Hao Zhang, Baoquan Chen
CVPR 2020

Learning Character-Agnostic Motion for Motion Retargeting in 2D
Kfir Aberman, **Rundi Wu***, Dani Lischinski, Baoquan Chen, Daniel Cohen-Or*
ACM SIGGRAPH 2019

ACADEMIC SERVICE

Reviewers for SIGGRAPH (2022, 2024, 2025), SIGGRAPH Asia (2020, 2022, 2023, 2025), NeurIPS (2021, 2022), ICLR (2022, 2023, 2024), CVPR (2023, 2024, 2025), ECCV (2024), ICCV (2025), ICML (2023, 2024), TVCG, Eurographics (2024).

TEACHING EXPERIENCES

Teaching Assistant, Columbia University   2024.02 - 2024.05
COMS W4167, Computer Animation
Instructor: Prof. Changxi Zheng

Teaching Assistant, Columbia University   2023.02 - 2023.05
COMS W4732, Computer Vision II: Learning
Instructor: Prof. Carl Vondrick

Teaching Assistant, Columbia University   2022.09 - 2022.12
COMS W4731, Computer Vision I: First Principles
Instructor: Prof. Shree Nayar

OPEN SOURCE PROJECTS

TensorLayer 2.0, a TensorFlow-based deep learning and reinforcement learning library designed for researchers and engineers.
Contributor for version 2.0 initial development.
`https://github.com/tensorlayer/tensorlayer`

HONORS & IMPORTANT AWARDS

1. Columbia SEAS Dean's Fellowship 2020, Columbia University

2. Peking University Scholarship Second Prize in the academic year of 2018-2019, Peking University

3. "Mount Qomolangma Climbing" Scholarship in the academic year of 2017-2018, Peking University

4. "Founder Group" Scholarship in the academic year of 2016-2017, Peking University

5. Merit Student in the academic year of 2016-2017 and 2018-2019, Peking University