

Ben Mildenhall

CONTACT INFORMATION 545 Soda Hall 708 280 1759
Berkeley, CA 94709 bmild@cs.berkeley.edu
<http://eecs.berkeley.edu/~bmild>

EDUCATION **University of California, Berkeley** 2015-
Ph.D. Candidate, Computer Science
Advised by Prof. Ren Ng

Stanford University 2011-2015
B.S. in Computer Science (Honors) and Mathematics

EXPERIENCE **Fyusion Inc.**, Research Intern Summer 2018
Worked with Rodrigo Ortiz-Cayon and Abhishek Kar on deep learning for view synthesis.

Google, Research Intern Summer 2017
Worked in Marc Levoy's group with Robert Carroll, Jiawen Chen, Dillon Sharlet, and Jon Barron on deep learning for multi-image denoising and demosaicking.

Pixar Animation Studios, Research Intern Summer 2014
Worked with Tom Duff, Nelson Max, and Mark Meyer on using sparse voxel octrees for geometry simplification when rendering complex scenes.

Stanford University, Undergraduate Research Intern (CURIS program) Summer 2013
Worked in Prof. Hanrahan's group with graduate students Daniel Ritchie and Matt Fisher on using probabilistic inference for reinforcement learning.

PUBLICATIONS **Neural Reflectance Fields for Appearance Acquisition**
Sai Bi*, Zexiang Xu*, Pratul Srinivasan, **Ben Mildenhall**, Kalyan Sunkavalli, Miloš Hašan, Yannick Hold-Geoffroy, David Kriegman, Ravi Ramamoorthi
arXiv, 2020

Fourier Features Let Networks Learn High Frequency Functions in Low Dimensional Domains
Matthew Tancik*, Pratul Srinivasan*, **Ben Mildenhall***, Sara Fridovich-Keil, Nithin Raghavan, Utkarsh Singhal, Ravi Ramamoorthi, Jonathan T. Barron, Ren Ng
NeurIPS, 2020 (spotlight)

NeRF: Representing Scenes as Neural Radiance Fields for View Synthesis
Ben Mildenhall*, Pratul Srinivasan*, Matthew Tancik*, Jonathan T. Barron, Ravi Ramamoorthi, Ren Ng
ECCV, 2020 (Best Paper Honorable Mention)

Deep Multi Depth Panoramas for View Synthesis
Kai-En Lin, Zexiang Xu, **Ben Mildenhall**, Pratul P. Srinivasan, Yannick Hold-Geoffroy, Stephen DiVerdi, Qi Sun, Kalyan Sunkavalli, Ravi Ramamoorthi
ECCV, 2020

Lighthouse: Predicting Lighting Volumes for Spatially-Coherent Illumination
Pratul Srinivasan*, **Ben Mildenhall***, Matthew Tancik, Jonathan T. Barron, Richard Tucker, Noah Snavely
CVPR, 2020

StegaStamp: Invisible Hyperlinks in Physical Photographs
Matthew Tancik*, **Ben Mildenhall***, Ren Ng

CVPR, 2020

Local Light Field Fusion: Practical View Synthesis with Prescriptive Sampling Guidelines

Ben Mildenhall*, Pratul Srinivasan*, Rodrigo Ortiz-Cayon, Nima Khademi Kalantari, Ravi Ramamoorthi, Ren Ng, Abhishek Kar
SIGGRAPH, 2019

Unprocessing Images for Learned Raw Denoising

Tim Brooks, **Ben Mildenhall**, Tianfan Xue, Jiawen Chen, Dillon Sharlet, Jonathan T. Barron
CVPR, 2019 (oral)

Burst Denoising with Kernel Prediction Networks

Ben Mildenhall, Jonathan T. Barron, Jiawen Chen, Dillon Sharlet, Ren Ng, Robert Carroll
CVPR, 2018 (spotlight)

DiffuserCam: Lensless Single-exposure 3D Imaging

Nick Antipa, Grace Kuo, Reinhard Heckel, **Ben Mildenhall**, Emrah Bostan, Ren Ng, Laura Waller
Optica, 2017

Approximations for the Distribution of Microflake Normals

Nelson Max, Tom Duff, **Ben Mildenhall**, Yajie Yan
The Visual Computer, 2017

Controlling Procedural Modeling Programs with Stochastically-Ordered Sequential Monte Carlo

Daniel Ritchie, **Ben Mildenhall**, Noah D. Goodman, Pat Hanrahan
SIGGRAPH, 2015

SERVICE

Reviewer for CVPR, ICCV, ECCV, SIGGRAPH, SIGGRAPH Asia, NeurIPS

Co-instructor, CS184 (Computer Graphics)

Summer 2020

Graduate Student Instructor, CS184 (Computer Graphics)

Spring 2017

Graduate Student Instructor, CS184 (Computer Graphics)

Spring 2016

HONORS AND
AWARDS

ECCV Best Paper Honorable Mention

2020

Tong Leong Lim Pre-Doctoral Prize, UC Berkeley

2017

Fannie and John Hertz Foundation Graduate Fellowship

2015

Terman Award, Stanford University

2015

Sterling Award, Stanford University

2015

CS348B rendering competition Grand Prize, Stanford University

2013

SKILLS

Python/NumPy, Tensorflow, JAX, C/C++, OpenGL, CUDA, Matlab