Xi Deng

(+01) 603-277-1035 | ✉ xd93@cornell.edu | ⌂ www.cs.cornell.edu/ xideng/

Education

Cornell University   *Ithaca, NY, US*

PH.D. CANDIDATE IN COMPUTER SCIENCE   *June. 2019 - present*

- Committee: Dr. Steve Marschner (Chair),   Dr.Noah Snavely,   Dr.Tomas Arias
- Minor in Physics.

Dartmouth College   *Hanover, NH, US*

M.S. IN COMPUTER SCIENCE   *Sept. 2016 - Mar. 2019*

- Committee: Dr. Wojciech Jarosz (Chair),   Dr.Peter Winkler,   Prof. Lorie Loeb.
- Thesis: Photon Surfaces: Rendering Volume Robustly with Unbiased Density Estimators

Nanjing University of Aeronautics and Astronautics   *Nanjing, China*

B.S. IN COMPUTER SCIENCE   *Sept. 2012 - June 2016*

Honors & Awards

2024-2025	**NVIDIA Fellowship Finalist**, NVIDIA	*NY, U.S.A*
2022-2023	**Adobe Research Fellowship**, Adobe Research	*NY, U.S.A*
2019-2020	**Booking.com Fellowship**, Cornell University	*NY, U.S.A*
2016-2019	**Master Scholarship**, Dartmouth College	*NH, U.S.A*
June, 2016	**Merit Graduates**, Nanjing University of Aeronautics and Astronautics	*Nanjing, China*
2013-2016	**First-Class Merit Scholarship**, Nanjing University of Aeronautics and Astronautics	*Nanjing,China*

Publication

Reconstructing translucent thin objects from photos   *Cornell University, NY*

XI DENG, ANDREA WEIDLICH, LIFAN WU , BRUCE WALTER, EUGENE D'EON, RAVI RAMAMOORTHI, STEVE MARSCHNER

Proceedings of SIGGRAPH Asia 2024

A Simple Approach to Differentiable Rendering of SDFs   *Cornell University, NY*

ZICHEN WANG, XI DENG, ZIYI ZHANG, WENZEL JAKOB, STEVE MARSCHNER

Proceedings of SIGGRAPH Asia 2024 (undergraduate student project advised by me)

Rendering Participating Media Using Path Graphs   *Cornell University, NY*

BECKY HU, XI DENG, FUJUN LUAN, MILOS HASAN, STEVE MARSCHNER

arXiv(undergraduate student project advised by me)

Neural Control Variates with Automatic Integration   *Cornell University, NY*

ZILU LI, GUANDAO YANG, QINGQING ZHAO, XI DENG, LEONIDAS GUIBAS, BHARATH HARIHARAN,GORDON WETZSTEIN

Proceedings of SIGGRAPH 2024, Aug 2024

Neural Field Cache for Monte Carlo Partial Differential Equation Solver   *Cornell University, NY*

ZILU LI, GUANDAO YANG, XI DENG, CHRISTOPHER DE SA, BHARATH HARIHARAN, STEVE MARSCHNER

Proceedings of SIGGRAPH Aisa 2023, December 2023

Reconstructing translucent objects using differentiable rendering   *Cornell University, NY*

XI DENG, FUJUN LUAN, BRUCE WALTER, KAVITA BALA, STEVE MARSCHNER

Proceedings of SIGGRAPH 2022, August 2022

Path Graphs: iterative path space filtering   *Cornell University, NY*

XI DENG, MILOS HASAN, NATHAN CARR, ZEXIANG XU, STEVE MARSCHNER

ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia 2021), 40(6), December 2021

Photon surfaces for robust, unbiased volumetric density estimation.   *Dartmouth College, NH*

XI DENG, SHAOJIE JIAO, BENEDIKT BITTERLI, WOJCIECH JAROSZ.

ACM Transactions on Graphics (Proceedings of SIGGRAPH), 38(4), July 2019.

Research Experience

NVIDIA Research   *Santa Clara, CA*

RESEARCH INTERN   *May. 2022 - Aug. 2022*

Adobe, Emerging Graphics Group

San Jose, CA

RESEARCH INTERN

May. 2020 - Aug. 2020

- Worked on "Path Graph" project under the supervision of Dr. Milos Hasan, Dr.Nathan Carr and Dr Zexiang Xu.
- Developed path graphs as a lightweight plugin for refining radiance estimates globally.

Disney Research Lab, Zurich

Zurich, Switzerland

R&D INTERN IN RENDERING GROUP

July. 2018 - Oct. 2018

- Supervised by Dr. Jan Novak and Dr. Marios Papas. Advised by Dr. Steve Marschner, Dr. Wojciech Jarosz ,and Dr. Bernd Bickel.
- Worked on fundamental improvement of an inverse renderer.

Dartmouth Visual Computing Lab

Hanover, NH

RESEARCH ASSISTANT

June. 2017 - Mar. 2019

- Worked on "Photon Surface" project under the supervision of Dr. Wojciech Jarosz.

DALI Lab

Hanover, NH

RESEARCH ASSISTANT

April. 2017 - Oct. 2017

- Supervised by Prof. Lorie Loeb.
- Developed a VR Website which allows users to "walk" around Moosiluake lodge of Dartmouth College online.
- Built models of the house with Photoscan, refined models with Maya, Create models of missing objects in Maya.

Teaching Experience

CS1110 Introduction to Computing Using Python.

Cornell University, U.S.A

INSTRUCTOR, IN ENGLISH

May. 2023 - Aug. 2023

Gave 60 hours of Lectures on teaching intro-level programming using Python.

Interactive Computer Graphics.

Cornell University, U.S.A

TEACHING ASSISTANT, IN ENGLISH

Feb. 2021 - May. 2021

Responsible for designing and lecturing 15-minute practice sessions, hosting office hours, grading, and answering questions online.

Introduction to Computer Graphics.

Cornell University, U.S.A

TEACHING ASSISTANT, IN ENGLISH

Sep. 2019 - Dec. 2019

Responsible for designing assignments, giving feedback, hosting office hours, and answering questions online.

3D Modeling.

Dartmouth College, U.S.A

TEACHING ASSISTANT, IN ENGLISH

Mar. 2018 - June. 2018

Responsible for reviewing assignments, giving feedback, hosting office hours and answering questions.

Smart-Phone Programming

Dartmouth College, U.S.A

TEACHING ASSISTANT, IN ENGLISH

Jan. 2017 - Mar. 2017

Responsible for grading projects and tests, hosting lab hours and office hours, and answering questions.

Computer Animation: The State of the Art (FA17)

Dartmouth College, U.S.A

TEACHING ASSISTANT, IN ENGLISH

Sept. 2017 - Dec. 2017

Responsible for hosting office hour and answering questions.

Academic Service

2022-2024	**ACM SIGGRAPH**,	Reviewer
2022-2024	**ACM SIGGRAPH Asia**,	Reviewer
2022-2023	**ACM Transactions on Graphics(TOG)**,	Reviewer
2022-2023	**Computer Graphics Forum**,	Reviewer
2024	**Euro Graphics**,	Reviewer
2023	**Pacific Graphics**,	Reviewer

Skills

Proficient in	C/C++, GLSL, Python, CUDA, Maya
Experience in	Java, JavaScript, Julia, MATLAB, Mathematica, LaTeX