PRANAV JAIN

University of Southern California

Email: pranavj@usc.edu

Website , Scholar

RESEARCH INTERESTS

Geometry Processing, Physical Simulations, Computer Graphics, Discrete Differential Geometry, Numerical Analysis of Partial Differential Equations

EDUCATION

University of Southern California   August 2023 - Present
Doctor of Philosophy (PhD), Computer Science   *Los Angeles, USA*
CGPA: 3.78/4.0

New York University   September 2021 - May 2023
Master of Science (MS), Scientific Computing   *New York, USA*
CGPA: 3.778/4.0

Indraprastha Institute of Information & Technology Delhi (IIITD)   August 2016 - August 2020
Bachelor of Technology with Honors (B-Tech Hons),   *New Delhi, India*
Computer Science and Applied Mathematics
CGPA: 8.59/10.0

PUBLICATIONS

Pranav Jain, Ziyin Qu, Peter Yichen Chen, and Oded Stein. 2024. Neural Monte Carlo Fluid Simulation. In ACM SIGGRAPH 2024 Conference Papers (SIGGRAPH '24). [link]

Liam Martin, **Pranav Jain**, Zachary Ferguson, Torkan Gholamalizadeh, Faezeh Moshfeghifar, Kenny Erleben, Daniele Panozzo, Steven Abramowitch, Teseo Schneider. A systematic comparison between FEBio and PolyFEM for biomechanical systems. In Computer Methods and Programs in Biomedicine, 2023. [link]

Zachary Ferguson, **Pranav Jain**, Denis Zorin, Teseo Schneider, and Daniele Panozzo. High-Order Incremental Potential Contact for Elastodynamic Simulation on Curved Meshes. In ACM SIGGRAPH 2023 Conference Proceedings (SIGGRAPH '23). [link]

Pranav Jain, Munawar Hasan, Donghoon Chang. Spy based analysis of selfish mining attack on multi-stage blockchain. In Cryptology ePrint Archive, 2019. [link]

RESEARCH EXPERIENCE

Adobe Research   May 2025 - August 2025
Research Intern   *Seattle, USA*
Advisor: Timothy Langlois, Danny Kaufman, Jui-hsien Wang

University of Southern California   August 2023 - Present
PhD Student   *Los Angeles, USA*
Advisor: Dr. Oded Stein

New York University   September 2021 - May 2023
Research Assistant   *New York, USA*
Advisor: Dr. Daniele Panozzo, Dr. Denis Zorin

nTopology   June 2022 - August 2022
Software Engineer Intern in Geometry Team   *New York, USA*
Advisor: Suraj Musuvathy, Ranjeeth Mahankali

Freie Universität Berlin [link]   September 2020 - August 2021
Research Intern   *(Virtual) Berlin, Germany*
Advisor: Dr. Konrad Polthier, Dr. Sunil Kumar Yadav

Fields Undergraduate Summer Research Programme 2020 [link]   July 2020 - August 2020
Research Intern   *(Virtual) Toronto, Canada*
Advisor: Dr. Thomas Uchida

Indraprastha Institute of Information & Technology Delhi [link]   August 2018 - August 2020
Research Assistant   *New Delhi, India*
Advisor: Dr. Kaushik Kalyanaraman

Indraprastha Institute of Information & Technology Delhi [link]   August 2018 - August 2020
Undergraduate Thesis   *New Delhi, India*
Advisor: Dr. Donghoon Chang

ACADEMIC COMMUNITY WORK

Tertiary reviewer for SIGGRAPH Asia 2025   July 2025

Tertiary reviewer for Pacific Graphics (PG) 2025   July 2025

Volunteered as a teaching assistant for the Poisson Reconstruction Project   July 2024 - August 2024
at Summer Geometry Initiative (SGI) 2024.

Member of the Conference Coffee team at SIGGRAPH Research Career Development Committee.   2021-2022
Organized the conference coffee event for SIGGRAPH and SIGGRAPH ASIA 2021 & 2022.

TEACHING EXPERIENCE

University of Southern California
Teaching Assistant: CSCI 103 - Introduction to Programming   Fall 2025
Teaching Assistant: CSCI 580 - 3D Graphics and Rendering   Spring 2025
Teaching Assistant: CSCI 596 - Scientific Computing and Visualization   Fall 2024
Teaching Assistant: CSCI 104 - Data Structures and Object Oriented Design   Spring 2024

New York University
Grader: MATH 263.3 - Applied Partial Differential Equations   Spring 2023
Grader: MATH 252 - Numerical Analysis   Spring 2023
Grader: MATH 263 - Partial Differential Equations   Fall 2021

AWARDS

Fields Undergraduate Summer Research Program 2020: One of 32 selected students from 200+ applicants for a funded research opportunity at the Fields Institute, Canada.

Dean's Award for Academic Excellence: For excellent academic performance in the 2018-19 undergraduate academic session.