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

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

TEACHING EXPERIENCE

University of Southern California
Teaching Assistant: CSCI 580 - 3D Graphics and Rendering　　　　January 2025 - April 2025
Teaching Assistant: CSCI 596 - Scientific Computing and Visualization　September 2024 - December 2024
Teaching Assistant: CSCI 104 - Data Structures and Object Oriented Design　January 2024 - April 2024

New York University
Grader: MATH 263.3 - Applied Partial Differential Equations　　　January 2023 - April 2023
Grader: MATH 252 - Numerical Analysis　　　　　　　　　　January 2023 - April 2023
Grader: MATH 263 - Partial Differential Equations　　　　　September 2021 - November 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.

ACADEMIC COMMUNITY WORK

Volunteered as a Teaching Assistant for the Poisson Reconstruction Project at Summer Geometry　　July 2024
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.