Pranav Nuti

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Employment

The University of Chicago Booth School of Business **2024–**
Principal Researcher
Mentored by Rad Niazadeh

Education

Stanford University **2018–2024**
PhD in Mathematics
Advised by Jan Vondrák

Indian Institute of Science (IISc), Bangalore **2014–2018**
Bachelor of Science (Research), Gold Medalist in Mathematics

Research

Conference Publications

Static Pricing for Single Sample Multi-unit Prophet Inequalities **SOSA 2026**
with Peter Westbrook

Online Matching and Contention Resolution for Edge Arrivals with Vanishing Probabilities **EC 2024**
with Will Ma, Calum MacRury

Prophet Inequalities with Cancellation Costs **STOC 2024**
with Farbod Ekbatani, Rad Niazadeh, and Jan Vondrák

Secretary Problems: The Power of a Single Sample **SODA 2023**
with Jan Vondrák

A Tight Competitive Ratio for Online Submodular Welfare Maximization **ESA 2023**
with Amit Ganz and Roy Schwartz

Toward an Optimal Contention Resolution Scheme for Matchings **IPCO 2023**
with Jan Vondrák

The Secretary Problem with Distributions **IPCO 2022**

Journal Publications

Toward an Optimal Contention Resolution Scheme for Matchings **Mathematical Programming 2025**
with Jan Vondrák

Online Matching and Contention Resolution for Edge Arrivals with Vanishing Probabilities **Operations Research, Minor Revision**
with Will Ma, Calum MacRury

Working Papers (available on request)

Optimal Prophet Inequalities with Buyback **(submitted)**
with Farbod Ekbatani, Rad Niazadeh, and Jan Vondrák

Stationary Online Contention Resolution Schemes **(submitted)**
with Mohammad Reza Aminian and Rad Niazadeh

Optimal Bayesian Online Allocation of Reusable Resources **(submitted)**
with Mohammad Reza Aminian and Rad Niazadeh

Selected Talks

Prophet Inequalities with Cancellation Costs **2025**
Chicago Junior Theorists Workshop

What is a Good Model for Online Decision Making? **2023**
SURIM Talk, Stanford University

Online Selection Problems and how Ramsey's Theorem Solves a Card Game **2023**
DACO Seminar, ETH Zürich

Between the Secretary Problem and the Prophet Inequality **2022**
Data-Driven Decision Processes Talk, Simons Institute, UC Berkeley

Maximum Matchings in Sparse Random Graphs **2022**
Department of Mathematics, Stanford University

Teaching

Papers

Engaging Activities for Teaching Linear Algebra **PRIMUS 2024**
with Shintaro Fushida-Hardy, Megan Selbach-Allen

Awards

Pólya Teaching Fellow Award **2024**
Awarded for outstanding teaching during the PhD program

Robert Osserman Teaching Award **2022**
Awarded for outstanding contributions as a teaching assistant at Stanford University

Hoefer Mentoring Award **2022**
Awarded for supporting undergraduate writing at Stanford University

Courses Taught as Instructor

Linear Algebra, Stanford Summer Engineering Academy **2021, 2022**
Equity and Inclusion Initiative, Stanford Engineering
This is a summer program that seeks to illuminate the brilliance of students who have been systemically marginalized in engineering. Along with teaching the course, in collaboration with my co-instructors, I also designed the curriculum. 38 classroom hours. Syllabus, lesson plans, handouts and descriptions of all activities are available.

Teaching Outside the University

Stanford Jail and Prison Education Project **2023**
San Francisco County Jail # 5
The project provides education services to people who are incarcerated in Bay Area jails. I helped design the curriculum, and taught two seminars.

Undergraduate Student Mentorship

Stanford Undergraduate Research in Mathematics **2023**
Department of Mathematics, Stanford University
The program is aimed at introducing Stanford undergraduate students to research in mathematics. I mentored Ethan Zhang, Ezra Steinberg, Peter Westbrook, and Quinn McIntyre. We proved several new results related to prophet inequalities. A report is avaialable.

Directed Reading Program **2020–2022, 2024**
Department of Mathematics, Stanford University
The program is aimed at helping undergraduates, especially members of historically underrepresented groups, participate in the larger mathematical community. I mentored several students: Alessandra Maranca, Sophia Sanchez, Ellen Xu, Donald Poindexter, Logan Bhamidipaty, and Sohan Vichare.

Graduate Student Mentorship

Stanford Summer Engineering Academy **2023**
Equity and Inclusion Initiative, Stanford Engineering
I interviewed instructors to hire for the program, helped design a new curriculum, and provided feedback to instructors.

TA Mentoring Program **2022–2023**
Department of Mathematics, Stanford University
The program is aimed at providing first-time TAs advice and feedback about leading section. I mentored Yosheb Getachew, Joao Campos Vargas, Zhenyuan Zhang, and Hongjian Yang.

Other Contributions

Organizer of the Student Probability Seminar **2021**
Department of Mathematics, Stanford University

WINGS Representative **2019–2020**
Department of Mathematics, Stanford University
The WINGS program aims to promote wellness amongst graduate students.

Other Awards

Bronze Medal, 54th International Mathematical Olympiad **2013**

KVPY Fellowship **2013–2018**
Awarded by the Govt. of India
A 100% scholarship for undergraduate education.

National Talent Search (NTS) Scholarship **2010–2011**
Awarded by the Govt. of India to high school students