

AJAYKRISHNAN E S

Email : aj66@ucsb.edu

Website: ajaykrishnan-es.github.io

EDUCATION

Ph.D. in Computer Science University of California, Santa Barbara Advisor: Prof. Daniel Lokshtanov Topics: Graph Algorithms, Algorithmic Graph Theory	2023 - current CGPA - 4/4
BS-MS (Specialisation in Mathematics) Indian Institute of Science Education and Research, Pune Thesis Title: Exact Exponential Algorithms & KNOT-FREE VERTEX DELETION	2018 - 2023 CGPA - 9.2/10

AWARDS AND RECOGNITION

Co-author of the paper that received the Mihai Pătraşcu Best Paper Award at SOSA. <i>Title: A Quasi-Polynomial Time Algorithm for 3-Coloring Circle Graphs.</i>	2026
Recipient of the Outstanding Teaching Assistant award at UC Santa Barbara. <i>Nominated by graduating seniors; awarded to one TA per department annually.</i>	2025
UCSB CS Summer Academic Fellowship in the amount of \$10K.	2024
Recipient of the Xytel Best Thesis Award in Mathematics at IISER Pune. <i>Awarded to one graduating student per discipline each year.</i>	2023
Graduated with distinction from IISER Pune. <i>An honor reserved for students with a CGPA above 9 (approximately the top 5%).</i>	2023
Recipient of the Innovation in Science Pursuit for Inspired Research scholarship. <i>A five-year fellowship awarded by the Government of India for pursuing science.</i>	2018

VISITS AND WORKSHOPS

SoCal Theory Day at University of California San Diego	Feb 2026
Institute of Mathematical Sciences, Chennai. Host: Prof. Saket Saurabh. Topic: Parameterized Algorithms.	Summer 2025
Workshop on Hardness of Approximation in P at DIMACS, Rutgers University	July 2025
Fusing Theory and Practice of Graph Algorithms at ICERM, Brown University	Feb 2025
Extroverted Sublinear Algorithms at Simons Institute	June 2024
Randomized Methods for Approximation and Parameterized Algorithms.	Dec 2022
Algorithms - To Improve, or Not to Improve, That's the Question!	Jan 2022

SELECT PUBLICATION

Note: In theoretical computer science, authors are listed in alphabetical order. Among my publications at venues which use ranked authorship, those marked with (★) indicate equal contribution from all authors.

A Quasi-Polynomial Time Algorithm for 3-Coloring Circle Graphs. (Best Paper Award)
Ajaykrishnan E S, Robert Ganian, Daniel Lokshtanov, Vaishali Surianarayanan. *SOSA 2026*

Fast Hypertree Decompositions via Linear Programming: Fractional and Generalized. (★)
Vaishali Surianarayanan, Anikait Mundhra, Ajaykrishnan E S, Daniel Lokshtanov. *SIGMOD 2025*

Beyond Exact Fairness: Envy-Free Incomplete Connected Fair Division.
Ajaykrishnan E S, Daniel Lokshtanov. *FSTTCS 2025*

SUBMITTED / IN PREPARATION

Algorithms for Min-Color Path with Bounded Color-Degree. *Submitted - FOCS*
Ajaykrishnan E S, Daniel Lokshtanov, Saket Saurabh, Jie Xue.

(Treewidth, Clique)-Boundedness and Poly-logarithmic Tree-Independence. *Submitted - IJM*
Maria Chudnovsky, Ajaykrishnan E S, Daniel Lokshtanov.

Parameterized Approximation of Rectangle Stabbing. *Submitted - ESA*
Huairui Chu, Ajaykrishnan E S, Daniel Lokshtanov, Anikait Mundhra,
Thomas Schiber, Xiaoyang Xu, Jie Xue.

Induced Minors and Coarse Tree Decompositions. *Preprint Available*
Maria Chudnovsky, Julien Codsi, Ajaykrishnan E S, Daniel Lokshtanov.

Chordal Bipartite Vertex Deletion is Fixed-Parameter Tractable. *In Preperation*
Ajaykrishnan E S, Anikait Mundhra. *Student Paper*

Exponential Time Approximating Scheme for Ordering Problems. *In Preperation*
Huairui Chu, Ajaykrishnan E S, Viktoria Korchemna, Daniel Lokshtanov,
Anikait Mundhra, Saket Saurabh, Thomas Schiber, Xiaoyang Xu, Jie Xue,
Xiongxin Yang.

SERVICE

Conference Reviewing:

FOCS 2024, ITCS 2025, COCOON 2025, ESA 2025, STACS 2026, SODA 2026, IWOCA 2026.

Mentorship Roles:

UC Santa Barbara, Early Research Scholars Program; a research program that seeks to give students, particularly those who are traditionally under-served in computing the foundational knowledge and skills for engaging in research in the discipline.

- Mentored a team of three undergraduate students. 2024-2025
Project Title: Teaching Assistant Assignment.
- Mentoring a team of four undergraduate students. 2025-current
Project Title: Low Distortion Metric Embedding.

Teaching Experience:

- Teaching Assistant at UCSB for CMPSC 130B - Data Structures and Algorithms II
With Prof. Subhash Suri; Fall 2023, Spring 2024, Winter 2025.
- Teaching Assistant at UCSB for CMPSC 130B - Data Structures and Algorithms II
With Prof. Eric Vigoda; Winter 2024.
- Teaching Assistant at UCSB for CMPSC 130B - Data Structures and Algorithms II
With Prof. Daniel Lokshtanov; Fall 2024.
- Teaching Assistant at UCSB for CMPSC 134 - Randomized Algorithms
With Prof. Eric Vigoda; Spring 2025.
- Teaching Assistant at UCSB for CMPSC 40 - Foundations of Computer Science
With Dr. Vaishali Surianarayanan; Summer 2024.
- Teaching Assistant at IISER-Pune for MTH 323 - Graph Theory
With Prof. Soumen Maity; Fall 2022.