Shreyas Pai

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Research Interests

My research interests are in Theoretical Computer Science, more specifically in Distributed Algorithms, Communication Complexity, and Combinatorial Optimization.

EDUCATION

PhD and MS in Computer Science

2016-2021

The University of Iowa

Iowa City, USA

Advisor: Prof. Sriram V. Pemmaraju. CGPA: 4.07/4

B.Tech in Computer Engineering

2012-2016

Veermata Jijabai Technological Institute

Mumbai, India

CGPA: 8.13/10

Professional EXPERIENCE

♦ Postdoctoral Researcher at Aulto University, Finland Host: Jara Uitto.

August 2021 – present

♦ Research Internship at Technion Israel Institute of Technology

May - July 2019

Host: Keren Censor-Hillel.

♦ Research Internship at Indian Institute of Science, Bangalore

May - July 2016

Host: Siddharth Barman

Fellowships

- ♦ Ballard Seashore Fellowship, Spring 2021
- ♦ Graduate College Summer Fellowship, Summer 2020 and 2019
- ♦ Graduate College Post Comprehensive Fellowship, Fall 2019

Teaching EXPERIENCE

- ♦ CS:4330 Theory of Computation, Teaching Assistant, Spring 2020
- ♦ CS:3330 Algorithms, Section 2, Instructor, Spring 2017 (https://homepage.cs.uiowa.edu/ ~sriram/3330/spring17)
- ♦ CS:1210 Computer Science 1: Fundamentals, Teaching Assistant, Fall 2016

PUBLICATIONS

- ♦ Deterministic Massively Parallel Algorithms for Ruling Sets, in PODC 2022 (BA) with Sriram Pemmaraju.
- ⋄ Risk-aware Temporal Cascade Reconstruction to Detect Asymptomatic Cases, in ICDM 2021 Hankyu Jang, Shreyas Pai, Bijaya Adhikari, and Sriram Pemmaraju.
- \diamond Can we Break Symmetry with o(m) Communication? in PODC 2021 with Gopal Pandurangan, Sriram Pemmaraju, and Peter Robinson.
- ♦ Sample-and-Gather: Fast Ruling Set Algorithms in the Low-Memory MPC Model, in FSTTCS with Kishore Kothapalli and Sriram Pemmaraju.
- ♦ Distributed Approximation on Power Graphs, in PODC 2020 with Reuven Bar-Yehuda, Keren Censor-Hillel, Yannic Maus, and Sriram Pemmaraju.

- Spatiotemporal clustering of in-hospital Clostridioides difficile infection, in Infection Control & Hospital Epidemiology 2019
 Shreyas Pai, Philip Polgreen, Alberto Segre, Daniel Sewell, and Sriram Pemmaraju.
- ♦ A Constant Approximation for Colorful k-Center, in ESA 2019 with Sayan Bandyapadhyay, Tanmay Inamdar, and Kasturi Varadarajan.
- Connectivity Lower Bounds in the Broadcast Congested Clique, in PODC 2019 (BA) and FSTTCS 2020
 with Sriram Pemmaraju.
- ♦ Large-Scale Distributed Algorithms for Facility Location with Outliers, in OPODIS 2018 with Tanmay Inamdar, and Sriram Pemmaraju.
- ♦ Near Optimal Clustering in the k-machine model, in ICDCN 2018 with Sayan Bandyapadhyay, Tanmay Inamdar, and Sriram Pemmaraju.
- ⋄ Symmetry Breaking in the Congest Model: Time— and Message—Efficient Algorithms for Ruling Sets, in PODC 2017 (BA) and DISC 2017 with Gopal Pandurangan, Sriram Pemmaraju, Talal Riaz, and Peter Robinson.

ACADEMIC SERVICE

Conference Reviewer:

ACM-SIAM Symposium on Discrete Algorithms (SODA).

ACM Symposium on Principles of Distributed Computing (PODC).

ACM Symposium on Parallelism in Algorithms and Architecture (SPAA).

International Symposium on Distributed Computing (DISC).

International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS).

Foundations of Software Technology and Theoretical Computer Science (FSTTCS).

International Conference on Distributed Computing and Networking (ICDCN).

International Colloquium on Structural Information and Communication Complexity (SIROCCO).

Conference on Principles of Distributed Systems (OPODIS).

Journal Reviewer:

Distributed Computing (DIST).

Program Committee Member:

International Conference on Distributed Computing and Networking (ICDCN) 2022.