ABISHEK SANKARARAMAN

Interests Machine Learning, Multi-Agent Systems, Random Graphs and Social Networks, Randomized Algorithms, Distributed Algorithms

Education

The University of Texas at Austin
Ph.D. in Electrical and Computer Engineering Sep. 2013 - Sep 2019
- Advisor: François Baccelli

Indian Institute of Technology, Madras
B.Tech in Electrical Engineering
M.Tech in Communication Systems and Signal Processing
Minor in Mathematics Aug 2008 - May2013
- Graduated highest GPA in the Dual Degree program.

Work Experience

University of California, Berkeley Berkeley,CA
Postdoctoral Researcher, Advisor: Venkat Anantharam Sep 2019 - Present

Simons Center for Network Mathematics Austin, TX
Graduate Research Assistant. Advisor: François Baccelli Jan 2014-Present

Huawei Research Labs Santa Clara, CA
Data Science Intern. Manager: Hui Zang May - Aug, 2015

Publications

ComHapDet: A Spatial Community Detection Algorithm for Haplotype Assembly
A. Sankararaman, Haris Vikalo and François Baccelli
In ACM CNB-MAC 2019. Minor Revision in BMC Genomics.

Interference Queuing Networks on Grids
A. Sankararaman, François Baccelli and Sergey Foss
In Annals of Applied Probability (*To Appear*).

Community Detection on Euclidean Random Graphs
A.Sankararaman, Emmanuel Abbe and François Baccelli
In ACM-SIAM Symposium on Discrete Algorithms (SODA), 2018.
Minor Revision at IMA Information and Inference,
Extended Abstract in Allerton, 2017.

Spatial Birth-Death Wireless Networks
A.Sankararaman and François Baccelli
In IEEE Transactions on Information Theory, 2017.
Extended Abstract in Allerton 2016.

Performance-Oriented Association in Large Cellular Networks with Technology Diversity
A.Sankararaman, Jeong woo Cho and François Baccelli
In International Teletraffic Congress (ITC), 2016.

CSMA k-SIC: A class of distributed MAC protocols and their performance evaluation
A.Sankararaman and François Baccelli
In IEEE Conference on Computer Communications (INFOCOM), 2015.

Under Review

Social Learning in Multi-Agent Multi-Armed Bandit Problem
A. Sankararaman, Ayalvadi Ganesh and Sanjay Shakkottai
Under Submission. Paper available on request.

In Preparation

Collaborative Learning in Multi-Agent Multi-Armed Bandit Problem
A. Sankararaman, Ronshee Chawla Ayalvadi Ganesh and Sanjay Shakkottai

Moment Bounds in Interference Queueing Networks
A. Sankararaman, Sayan Banerjee

Teaching and Mentorship

Teaching Assistant, *Advanced Probability - Inference and Learning* — Spring 2018
Teaching Assistant, *Probability and Stochastic Processes (Graduate)* — Fall 2018
Duties include holding office hours, setting homework and exam problems.

Undergraduate Student Mentor - *Mixing Times for Random Walks on Groups* — Spring 2018
Research supervisor for an undergraduate student project in the Mathematics Department

Leadership

- WNCG Student Leadership Award — 2018.

Talks

- *Interference Queuing Networks on Grids*
  Talk at INFORMS Applied Probability Society, Brisbane, Australia. — Jul 2019
  Talk at UNC-Chapel Hill Probability Seminar, Chapel Hill, NC. — Feb 2019
  Talk at Austin-TAMU Probability Seminar, Austin, TX. — May 2018
  Talk at Heriot-Watt University, Edinburgh UK — Feb 2018

- *Community Detection on Euclidean Random Graphs*
  Talk at MIT Research Laboratory of Electronics, Cambridge MA — Dec 2018
  Talk at University of Massachusetts, Amherst, MA — Dec 2018
  Talk at Indian Institute of Technology Madras, Chennai — Jan 2018
  Talk at ACM-SIAM SODA Conference, New Orleans, LA — Jan 2018
  Talk at The University of Texas at Austin — May 2017

- *Spatial Birth Death Process on the Continuum*
  Talk at Indian Institute of Technology Madras, Chennai — Jan 2017
  Talk at Princeton University — Nov 2016
  Talk at Allerton Conference on Communication Control and Computing — Oct 2016
  Talk at INRIA - Ecole Normale Supérieure, Paris — Sep 2016

- *Technology Diversity - A Framework for Base Station Association in Large Cellular Networks*
  Talk at 28th, International Teletraffic Congress (ITC-28), Würzburg, Germany — Sep 2016

- *CSMA k-SIC: A Class of MAC Protocols*
  Talk at IEEE INFOCOM, Hong Kong — May 2015

Professional Services

- Organizer for Random Structures Seminar at UT Austin Math dept. — 2017-2019.
- Reviewer for IEEE ISIT (International Symposium on Information Theory) — 2019
- Reviewer for Queueing Systems Journal — 2019
- Reviewer for ACM-SIAM SODA (Symposium on Discrete Algorithms) — 2019
- Reviewer for IEEE FOCS (Foundations of Computer Science) — 2018
- Reviewer for SpaSWIN (Spatial Stochastic Models for Wireless Networks) — 2018
- Reviewer for Performance Evaluation — 2017
- Reviewer for IEEE Transactions on Information Theory — 2016-2019
- Reviewer for IEEE Transactions on Wireless Communications — 2015-2019

References

François Baccelli
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