ABISHEK SANKARARAMAN

INTERESTS

Machine Learning, Multi-Agent Systems, Wireless Networks, 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 - May 2013

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

RESEARCH

<u>Machine Learning</u>

Social Learning in Multi-Agent Multi-Armed Bandit Problem
A. Sankararaman, Ayalvadi Ganesh and Sanjay Shakkottai
ACM SIGMETRICS 2020

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

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

The Gossiping Insert-Eliminate Algorithm for Multi Agent Multi Armed Bandits
Ronshee Chawla*, A. Sankararaman*, Ayalvadi Ganesh and Sanjay Shakkottai
Under Submission to AISTATS 2020   * Equal Contribution

<u>Applied Mathematics</u>

Interference Queuing Networks on Grids
A. Sankararaman, François Baccelli and Sergey Foss
Annals of Applied Probability, October 2019, Vol. 29, No. 5, 2929-2987.

<u>Wireless Networks</u>

Spatial Birth-Death Wireless Networks
A.Sankararaman and François Baccelli
IEEE Transactions on Information Theory, June 2017, 63 (6), 3964-3982.
Extended Abstract in Allerton 2016.

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

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

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	• Reviewer for Journal of Applied Probability (JAP),	2019-2020
	• 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
	Simons Chair, Dept of ECE and Mathematics, The University of Texas at Austin, Austin, TX, USA.
	`baccelli@math.utexas.edu`
	Sanjay Shakkottai
	Department of ECE, The University of Texas at Austin, Austin, TX, USA.
	`shakkott@austin.utexas.edu`
	Sergey Foss,
	School of Mathematical Sciences, Heriot-Watt University, Edinburgh EH14 4AS, UK.
	`s.foss@hw.ac.uk`