ABISHEK SANKARARAMAN

CONTACT INFORMATION	1626 W.6th St, Unit A Austin, Texas, 78703	Mobile: +1 5126985191 Email: abishek@utexas.edu

INTERESTS   Random Graphs, Stochastic Dynamical Systems, Machine Learning, Algorithms
Application Areas: Social Networks, Bioinformatics, Wireless Networks

EDUCATION

The University of Texas at Austin
Ph.D. in Electrical and Computer Engineering   Jan. 2013 - Present

- Advisor: François Baccelli

Indian Institute of Technology, Madras
B.Tech in Electrical Engineering

M.Tech in Communication Systems and Signal Processing
Minor in Mathematics   2008 - 2013
- Graduated ranked 1st in the Department.

WORK EXPERIENCE

Wireless Networking and Communications Group (WNCG), UT Austin   Austin, TX
Graduate Research Assistant. Advisor: François Baccelli   Jan 2014-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

1. **Interference Queuing Networks on Grids**
A. Sankararaman, François Baccelli and Sergey Foss
arXiv preprint arXiv:1710.09797, 2017. Under review at Annals of Applied Probability.

2. **Community Detection on Euclidean Random Graphs**
A.Sankararaman, Emmanuel Abbe and François Baccelli
In *ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2018.
Extended Abstract in 55th *Allerton Conference*, 2017.
Full Version Under Review at IMA Information and Inference.

3. **Spatial Birth-Death Wireless Networks**
A.Sankararaman and François Baccelli
In *IEEE Transactions on Information Theory*, 63(6):3964–3982, 2017.
Preliminary Version in 54*th Allerton Conference*, October 2016.

4. **Performance-Oriented Association in Large Cellular Networks with Technology Diversity** A.Sankararaman, Jeong woo Cho and François Baccelli
In *2016 28th International Teletraffic Congress (ITC 28)*, Vol. 1, pp 94-102. Sep 2016, IEEE.

5. **CSMA k-SIC: A class of distributed MAC protocols and their performance evaluation** A.Sankararaman and François Baccelli
In *2015 IEEE Conference on Computer Communications (INFOCOM)*, pages 2002-2010, April 2015.

PAPERS UNDER PREPARATION

6. **Haplotype Phasing Through Euclidean Community Detection**
with H. Vikalo and François Baccelli

7. **Gossiping Bandits**
with S. Shakkottai and A. Ganesh

8. **Bandits in a Dynamic Changing Environment**
with R. Chawla, S. Shakkottai and A. Ganesh

TEACHING AND MENTORSHIP	Teaching Assistant, *Advanced Probability - Inference and Learning* *The University of Texas at Austin*	Spring 2018

Duties include holding office hours, setting homework and exam problems.

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

My main duty is to propose a research topic to the student and then aid in executing it. We decided to study mixing times for random walks on groups, in particular the cutoff-phenomenon. At the end of the project, the student is expected to give a public seminar on the project.

TALKS AND PRESENTATIONS

- *Interference Queuing Networks on Grids*
  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 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 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
- 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.
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Emmanuel Abbe,
Applied and Computational Mathematics and Department of Electrical Engineering,
Princeton University, Princeton, NJ, USA.
`eabbe@princeton.edu`