Virag Shah

Postdoctoral Scholar
Stanford University
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https://virags.github.io/

Education

The University of Texas at Austin 2015
Ph.D. in Electrical and Computer Engineering
Advisor: Prof. Gustavo de Veciana

Indian Institute of Science (IISc), Bangalore 2009
Master of Engineering in Telecommunications
Advisor: Prof. Neelesh B. Mehta

Mumbai University 2007
Bachelor of Engineering in Electronics

Interests

- Machine learning and AI applications
- Active learning matching markets

Experience

Stanford University Stanford, CA
Postdoctoral Scholar Nov 2017 – present
Hosts: Prof. Ramesh Johari and Prof. Jose Blanchet

Indian Institute of Technology, Bombay Mumbai, Maharashtra
Visiting Faculty Aug 2017 – Oct 2017
Electrical Engg. Department

Microsoft Research - Inria Joint Centre Palaiseau, France
Postdoctoral Scholar Jan 2016 – July 2017
Hosts: Dr. Laurent Massoulié

The University of Texas at Austin Austin, TX
Simons Postdoctoral Fellow Fall 2015
Host: Prof. François Baccelli

The University of Texas at Austin Austin, TX
MCD Fellow, Graduate Research Assistant Aug 2010 – Jul 2015
Advisor: Prof. Gustavo de Veciana

Alcatel Lucent Bell Labs Crawford Hill, NJ
Research Intern Summer 2013
Mentors: Dr. Murali Kodialam and Dr. T. V. Lakshman

Indian Institute of Technology, Bombay Mumbai, Maharashtra
Research Fellow Nov 2009 – Jul 2010
Mentors: Prof. D. Manjunath and Prof. Bikash K. Dey

Awards

- **Best Paper Award, IEEE INFOCOM 2014** at Toronto, Canada. One of two papers selected (tied) from the 1650 papers submitted, and 313 papers accepted to the conference.
- **MCD Fellowship** at The University of Texas at Austin, 2010-11. Awarded to about top 1% applicants at the graduate school.

- **Best Paper Award, National Conf. on Communications 2010** at IIT Madras, India in communications track. 250 papers submitted, and 105 accepted to conference with 48 in communications track.

Ongoing works

- **V. Shah**, R. Johari, J. Blanchet, "Network Effects in Bandit Learning," to be presented at ICML Workshop on Causal ML, 2018
- **V. Shah**, S. Schmit, R. Johari, "Optimal Testing in the Experiment-Rich Regime," to be presented at ICML Workshop on Causal ML, 2018.
- **V. Shah**, L. Gulikers, L. Massoulie, M. Vojnovic, "Adaptive matching algorithms for expert systems with uncertain task types," Allerton Conference, Oct 2017.

Peer-reviewed Conference Publications

- **V. Shah**, A. Bouillard, F. Baccelli, "Delay comparison of delivery and coding policies in data Clusters," Allerton Conference, Oct 2017.
- **V. Shah** and G. de Veciana "Impact of fairness and heterogeneity on delays in large-scale content delivery systems," in ACM SIGMETRICS, Jun. 2015.
- **V. Shah** and G. de Veciana "Performance evaluation and asymptotics for content delivery networks," in IEEE INFOCOM, Apr. 2014.
- **V. Shah**, G. de Veciana, and G. Kesidis, "Learning to route queries in unstructured P2P networks: Achieving throughput optimality subject to query resolution constraints," in IEEE INFOCOM, Mar. 2012.
- **V. Shah**, B. K. Dey, and D. Manjunath, "Efficient flow allocation algorithms for in-network function computation," in IEEE GLOBECOM, Dec. 2011.
- **V. Shah**, B. K. Dey, and D. Manjunath, "Network flows for functions," in IEEE International Symposium of Information Theory (ISIT), Aug. 2011.
- **V. Shah**, N. B. Mehta, and R. Yim, "A complete characterization of an optimal timer based selection scheme," in IEEE International Conference on Communications (ICC), May 2010.
- A. S. Teertha, N. B. Mehta, **V. Shah**, "On optimal timer-based distributed selection for rate-adaptive multi-user diversity systems," National Conference on Communications (NCC), India, Jan. 2010.
- **V. Shah**, N. B. Mehta, and R. Yim, "Relay selection and data transmission throughput tradeoff in cooperative systems," in IEEE GLOBECOM, Dec. 2009.
- **V. Shah**, N. B. Mehta, and R. Yim, "Analysis, insights and generalization of a fast decentralized relay selection mechanism," in IEEE International Conference on Communications (ICC), Jun. 2009.

Journal Publications

- T. Bonald, C. Comte, **V. Shah**, G. de Veciana, "Poly-Symmetry in Processor-Sharing Systems," *Queuing Systems* (QUESTA), accepted, 2017.
- **V. Shah**, G. de Veciana, and G. Kesidis "A stable approach for routing queries in unstructured P2P networks," *IEEE/ACM Trans. on Networking* (ToN), Oct. 2016.
- **V. Shah** and G. de Veciana, "Impact of fairness and heterogeneity on delays in large-scale content delivery systems," *Queuing Systems* (QUESTA), Aug. 2016.
- **V. Shah** and G. de Veciana, "Asymptotic independence of servers' utilization in queuing systems with limited resource pooling," *Queuing Systems* (QUESTA), Jun. 2016.
- **V. Shah** and G. de Veciana, "High performance centralized content delivery infrastructure: models and asymptotics," *IEEE/ACM Trans. on Networking* (ToN), Oct. 2015.
- **V. Shah**, B. K. Dey, and D. Manjunath, "Network flows for functions," *IEEE J. on Selected Areas in Comm.* (JSAC) Special Issue on In-Network Computation, Mar. 2013.
- **V. Shah**, N. B. Mehta, and D. Bethanabhotla, "Performance of a Fast, Distributed Multiple Access Based Relay Selection Algorithm Under Imperfect Statistical Knowledge", *IEEE Trans. on Wireless Comm.* (TWC), Oct. 2011.
- **V. Shah**, N. B. Mehta, and R. Yim, "The relay selection and transmission tradeoff in cooperative communication systems," *IEEE Trans. on Wireless Comm.* (TWC), Aug. 2010.
- **V. Shah**, N. B. Mehta, and R. Yim, "Optimal timer based selection schemes," *IEEE Trans. on Comm.* (TCOM), Jun. 2010.

- **V. Shah**, N. B. Mehta, and R. Yim, "Splitting algorithms for fast relay selection: Generalizations, analysis, and a unified view," *IEEE Trans. on Wireless Comm.* (TWC), Apr. 2010.

Language Skills

Python, C, MATLAB.

Teaching Experience

Teaching Assistant, The University of Texas at Austin Fall 2013
Probability and Stochastic Processes

References

Prof. Ramesh Johari
Dept. Management Science and Engg.
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Prof. Jose Blanchet
Dept. Management Science and Engg.
Stanford University
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Dr. Laurent Massoulié
Director
Microsoft Research-Inria Joint Centre
Palaiseau, France
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Prof. François Baccelli
Simons Chair, Dept. Math. and ECE
The University of Texas at Austin
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Prof. Gustavo de Veciana
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