

DEVAVRAT SHAH

Professor Director
Department of EECS Statistics & Data Science Center
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Education:

<u>School</u>	<u>Degree</u>	<u>Date</u>
Indian Institute of Technology, Bombay	B.Tech.	1999
Stanford University	Ph.D.	2004

Principal Fields of Interest:

Networks; statistical inference; social data processing

Industry Experience:

<u>Employer</u>	<u>Position</u>	<u>Beginning</u>	<u>Ending</u>
BRIMS, HP Lab	Research Intern	July 2000	Sept. 2000
Sahasra (network startup)	Research scientist	June 2001	Sept. 2001
Netflix, Inc.	Consultant	July 2012	Jan. 2013
Celect (data-science startup)	Founder, Chief scientist	June 2013	present

Awards Received

<u>Award</u>	<u>Date</u>
President of India Gold Medal	1999
IEEE Infocom best paper award	2004
INFORMS George B. Dantzig Best Dissertation Award	2005
NSF CAREER	2006
ACM Sigmetrics best paper award	2006
First ACM Sigmetrics Rising Star Award	2008
NIPS outstanding paper award (supervised student)	2008
ACM Sigmetrics best student paper award (supervised student)	2009
INFORMS Erlang Prize from Applied Probability Society	2010
INFORMS MSOM best student paper award (supervised student)	2010
ACM Sigmetrics best student paper award (supervised student)	2012
INFORMS Applied Probability Society Best Publication Award	2012
INFORMS Nicholson Paper Honorary Mention (supervised student)	2013
Distinguished Young Alumni Award, IIT Bombay	2015
INFORMS Revenue Management and Pricing Section Prize	2015
INFORMS Management Science Best Publication Award	2016

Industry Board:

Celect, Inc. founder and chief scientist

Selected Publications:

1. Shah D., "Gossip algorithms," *Foundations and Trends in Networking*, Vol. 3, No. 1, pages: 1-125, 2008.
2. Bayati M., D. Shah, and M. Sharma, "Max-Product for Maximum Weight Matching: Convergence, Correctness, and LP Duality," *IEEE Transaction on Information Theory*, Volume 54, No. 3, pp. 1241-1251, March 2008.
3. Jagabathula S. and D. Shah, "Inferring rankings under constrained sensing," *IEEE Transactions on Information Theory*, Volume 57, No. 11, pp. 7288-7306, 2011.
4. Shah D., and D. Wischik, "Switched networks with maximum weight policies: fluid approximation and multiplicative state space collapse," *The Annals of Applied Probability*, Volume 22, No. 1, pp. 70-127, 2012.
5. Shah D., and J. Shin, "Randomized scheduling algorithm for queueing networks," *The Annals of Applied Probability*, Volume 22, No. 1, pp. 128-171, 2012.
6. Gamarnik D., D. Shah and Y. Wei, "Belief propagation for min-cost network flow: convergence & correctness," *Operations Research*, Volume 60, No. 2, pp. 410-428, 2012.
7. Shah D., N. S. Walton and Y. Zhong, "Optimal queue-size scaling in switched networks," *The Annals of Applied Probability*, Volume 24, No. 6, pp. 2207-2245, 2014.
8. Karger D., S. Oh and D. Shah, "Budget-optimal task allocation for reliable crowd-sourcing systems," *Operations Research*, Volume 62, No. 1, pp. 1-24, 2014.
9. Shah D. and T. Zaman, "Finding rumor sources on random trees," *Operations Research*, 2016.
10. Negahban S., S. Oh and D. Shah, "Rank Centrality: Ranking from pair-wise comparisons," *Operations Research*, 2016.

Selected Patents:

1. Ammar Tawfiq Ammar, Vivek Francis Farias, Srikanth Jagabathula, Devavrat D. Shah, "System and Method for Finding Mood-Dependent Top Selling/Rated Lists," US 20130054616, 2013.
2. Ammar Tawfiq Ammar, Vivek Francis Farias, Srikanth Jagabathula, Devavrat D. Shah, "System and Method For Providing Personalized Recommendations," US 20130054498, 2013.
3. Jonathan Perry, Devavrat D. Shah, Hari Balakrishnan, "Rateless and rated coding using spinal codes," US 8724715, 2014.
4. Tauhid Rashed Zaman, Devavrat D. Shah, "Dynamic influence tracking engine and method," US 20130198205, 2013.