

Stanford



Ramesh Johari

Professor of Management Science and Engineering and, by courtesy, of Electrical Engineering

CONTACT INFORMATION

- **Administrator**

Jenny Lam - Administrative Associate

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Tel 650-725-0550

Bio

BIO

Johari is broadly interested in the design, economic analysis, and operation of online platforms, as well as statistical and machine learning techniques used by these platforms (such as search, recommendation, matching, and pricing algorithms).

ACADEMIC APPOINTMENTS

- Professor, Management Science and Engineering
- Professor (By courtesy), Electrical Engineering
- Affiliate, Precourt Institute for Energy
- Member, Institute for Computational and Mathematical Engineering (ICME)

HONORS AND AWARDS

- George E. Nicholson Student Paper Competition (First Place), INFORMS (2003)
- George M. Sprowls Doctoral Dissertation Award, MIT EECS (2004)
- Doctoral Dissertation Award (Honorable Mention), ACM (2004)
- Okawa Foundation Research Grant, Okawa Foundation (2005)
- Telecommunications Dissertation Award, INFORMS (2006)
- CAREER Award, National Science Foundation (2007)

PROFESSIONAL EDUCATION

- PhD, MIT (2004)

LINKS

- <http://www.stanford.edu/people/ramesh.johari>: <http://www.stanford.edu/people/ramesh.johari>

Teaching

COURSES

2019-20

- Fundamentals of Data Science: Prediction, Inference, Causality: MS&E 226 (Aut)

2018-19

- "Small" Data: Prediction, Inference, Causality: MS&E 226 (Aut)
- Free and Incentivized Exploration in Online Learning: MS&E 326 (Spr)

2017-18

- "Small" Data: MS&E 226 (Aut)
- Advanced Topics in Game Theory with Engineering Applications: MS&E 326 (Spr)

2016-17

- "Small" Data: MS&E 226 (Aut)
- Senior Project: MS&E 108 (Win)
- Stochastic Modeling: MS&E 221 (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Kristen M. Altenburger, Imanol Arrieta Ibarra, Nikhil Garg, Neal Jean, Wanyi Li, Xiuyuan Lu, Faidra Monachou, Stephen Ragain

Doctoral Dissertation Advisor (AC)

Tum Chaturapruek, Hannah Li

Orals Evaluator

Tum Chaturapruek

Master's Program Advisor

Donny Flynn, Simon Hagege, Luca Schroeder, Yue Wang, Haoran Xu

Undergraduate Major Advisor

Emily Guthrie

Doctoral (Program)

Bar Light, Chenru Liu

Postdoctoral Research Mentor

Mohammad Rasouli

Publications

PUBLICATIONS

- **Economic Modeling in Networking: A Primer.** *Foundations and Trends in Networking*
Berry, R., Johari, R.
NOW Publishers..2013: 1
- **Resource management with semiautonomous users.** *To appear in IEEE/ACM Transactions on Networking.*
DiPalantino, D., Johari, R.

2012

- **Mean field equilibria of multiarmed bandit games.**

Gummadi, R., Johari, R., Yu, J.-Y.

2012

- **Information and the value of execution guarantees.**

Iyer, K., Johari, R., Moallemi, C., C.

2012

- **Mean field equilibria of dynamic auctions with learning.**

Iyer, K., Johari, R., Sundararajan, M.

2011

- **Heavy traffic approximation of equilibria in resource sharing games.**

Wu, Y., Bui, L., Johari, R.

2011

- **Committing bandits.**

Bui, L., Johari, R., Mannor, S.

2011

- **How many tiers? Pricing in the Internet transit market.**

Valancius, V., Lumezanu, C., Feamster, N., Johari, R., Vazirani, V.

2011

- **Mean field analysis for large population stochastic games.**

Adlakha, S., Johari, R., Weintraub, G., Y., Goldsmith, A.

2010

- **Mean field equilibrium in dynamic games with complementarities.**

Adlakha, S., Johari, R.

2010

- **Information aggregation in smooth markets.**

Iyer, K., Johari, R., Moallemi, C., C.

2010

- **Congestible services and network effects.**

Johari, R., Kumar, S.

2010

- **Information theoretic operating regimes of large wireless networks. *IEEE Transactions on Information Theory***

Ozgur, A., Johari, R., Tse, D., Leveque, O.

2010; 1 (56): 427-437

- **Network formation: bilateral contracting and myopic dynamics. *IEEE Transactions on Automatic Control***

Arcaute, E., Johari, R., Mannor, S.

2009; 8 (54): 1765-1778

- **A comparison of bilateral and multilateral exchanges for peer-assisted content distribution.**

Aperjis, C., Freedman, M., J., Johari, R.

2008

- **Local myopic dynamics in network formation games.**

Arcaute, E., Johari, R., Mannor, S.

2008

- **Peer-assisted content distribution with prices.**

Aperjis, C., Freedman, M., J., Johari, R.

2008

- **Oblivious equilibrium for general stochastic games with unbounded costs.**
Adlakha, S., Johari, R., Weintraub, G., Y., Goldsmith, A.
2008
- **Oblivious equilibrium for general stochastic games with concave costs.**
Adlakha, S., Johari, R., Weintraub, G., Y., Goldsmith, A.
2008
- **A comparison of bilateral and multilateral exchanges for peer-assisted content distribution.**
Aperjis, C., Freedman, M., J., Johari, R.
2008
- **Prices are right: aligning incentives for peer-assisted content distribution.**
Freedman, M., J., Aperjis, C., Johari, R.
2008
- **Oblivious equilibrium for general stochastic games with many players.**
Abhishek, V., Adlakha, S., Johari, R., Weintraub, G., Y.
2007
- **Efficiency loss and the design of scalable resource allocation mechanisms.** *Algorithmic Game Theory*
Johari, R.
edited by Nisan, N., Roughgarden, T., Tardos, E.
Cambridge University Press: Cambridge, United Kingdom..2007: 543–567
- **Revenue management for content delivery.**
Shakkottai, S., Johari, R.
2007
- **Network formation: bilateral contracting and myopic dynamics.**
Arcaute, E., Johari, R., Mannor, S.
2007
- **A peer-to-peer system as an exchange economy.**
Aperjis, C., Johari, R.
2006
- **Positive externalities and optimal scale.**
Kumar, S., Johari, R.
2006
- **Efficiency loss in a network resource allocation game: the case of elastic supply.** *IEEE Transactions on Automatic Control*
Johari, R., Mannor, S., Tsitsiklis, J., N.
2005; 11 (50): 1712-1724
- **Communication requirements of VCG-like mechanisms in convex environments.**
Johari, R., Tsitsiklis, J., N.
2005
- **Network resource allocation and a congestion game: the single link case.**
Johari, R., Tsitsiklis, J., N.
2003
- **End-to-end congestion control for the Internet: delays and stability.** *IEEE/ACM Transactions on Networking*
Johari, R., Tan, D., K.H.
2001; 6 (9): 818-832