

ACHAL BASSAMBOO

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Donald P. Jacobs Center
2001 Sheridan Road, Evanston, IL 60208

EDUCATION

Ph.D. *Business - Operations, Information and Technology*, Stanford University (2005)

Dissertation title: *Mathematical Models for Call Centers*

Dissertation advisors: J. Michael Harrison (GSB, Stanford University) and Assaf Zeevi (GSB, Columbia University)

M.S. *Statistics*, Stanford University (2004)

B.Tech. *Mechanical Engineering*, Indian Institute of Technology-Delhi (2000)

PROFESSIONAL EXPERIENCE

- 2012 – *Kellogg School of Management, Northwestern University, Evanston, IL*
Professor of Managerial Economics and Decision Sciences
Co-director for MMM program (a dual degree program), 2014 –
- 2009 – 2012 *Kellogg School of Management, Northwestern University, Evanston, IL*
Associate Professor of Managerial Economics and Decision Sciences
- 2006 – 2009 *Kellogg School of Management, Northwestern University, Evanston, IL*
Assistant Professor of Managerial Economics and Decision Sciences
- 2005 – 2006 *Kellogg School of Management, Northwestern University, Evanston, IL*
Donald P. Jacobs Scholar in Managerial Economics and Decision Sciences
- 2001 – 2005 *Stanford University, Stanford, CA*
Research and teaching assistant
- 2000 (Jun-Jul) *IBM Indian Research Lab, New Delhi, India*
Summer Internship
Project: Efficient Algorithm for winner determination in N-product auctions.
- 1999 (May-Aug) *IBM Indian Research Lab, New Delhi, India*
Summer Internship
Project: Optimum scheduling policy for a *Multiproduct single processor*.

RESEARCH INTERESTS

Applied probability and stochastic models, Stochastic systems: performance analysis and optimal control, Flexibility, Real-time information sharing, Retail Operations and Service Systems

PUBLICATIONS

Appeared/Forthcoming

1. R. Ibrahim, M. Armony, A. Bassamboo Does the Past Predict the Future? The Case of Delay Announcements in Service Systems. *Forthcoming, Management Science*.
2. A. Bassamboo, and R. S. Randhawa. Scheduling Homogeneous Impatient Customers. *Forthcoming, Management Science*.
3. G. Allon, A. Bassamboo and Q. Yu, The impact of delay announcements on consumers: An empirical study. *Forthcoming, Management Science*.
4. G. Allon, A. Bassamboo, R. Cui and J. A. Van Mieghem, Information sharing in supply chains: An empirical and theoretical valuation. *Management Science*, 61(11): 2803–2824, 2015.
5. T. Huang, G. Allon and A. Bassamboo, Bounded rationality in queueing systems. *Manufacturing and Service Operations Management*, 15(2):263–279, 2013.
6. M. Lim, A. Bassamboo, M. Daskin and S. Chopra, Facility location decisions with random disruptions and imperfect estimation. *Manufacturing and Service Operations Management*, 15(2), 239–249, 2013.
7. A. Bassamboo, L. Y. Chu and R. S. Randhawa, Designing Flexible Systems Using a New Notion of Submodularity. *Operations Research Letters*, 41(1): 107–111, 2013.
8. A. Bassamboo, R. Randhawa and J. A. Van Mieghem, A little flexibility is all you need: Asymptotic optimality of tailored chaining and pairing in queueing systems. *Operations Research*, 60:1423 – 1435, 2012.
9. E. Cil, G. Allon and A. Bassamboo, Large-scale Service Marketplaces: The Role of the Moderating Firm. *Management Science*, 58: 1854 – 1872, 2012.
10. G. Allon, A. Bassamboo and I. Gurvich, “We will be right with you:” Managing customers with vague promises. *Operations Research*, 59:1382 – 1394, 2011.
(Second prize in 2008 INFORMS JFIG Competition.)
11. G. Allon, and A. Bassamboo, Impact of delaying the delay announcement. *Operations Research*, 59:1198 – 1210, 2011.
12. G. Allon and A. Bassamboo, Buying from the babbling retailer? The impact of availability information on customer behavior, *Management Science*, 57:713 – 726, 2011.
13. A. Bassamboo, R. S. Randhawa, and J. A. Van Mieghem, Optimal flexibility configurations in newsvendor networks: Going beyond chaining and pairing. *Management Science*, 56:1526 – 1303, 2010.

14. A. Bassamboo and R. S. Randhawa, On the accuracy of fluid models for capacity sizing in queueing systems with impatient customers. *Operations Research*, 58: 1398 – 1413, 2010.
(Third prize in 2010 INFORMS JFIG Competition.)
15. A. Bassamboo, R. S. Randhawa, and A. Zeevi, Capacity sizing under parameter uncertainty: Safety staffing principles revisited. *Management Science*, 56:1668– 1686, 2010.
16. M. Sohoni, A. Bassamboo, S. Chopra, U. Mohan and N. Sendil, Threshold incentives over multiple periods and the sales hockey stick phenomenon. *Naval Research Logistics*, 57:503 – 518, 2010.
17. Lim, M., M. Daskin, A. Bassamboo and S. Chopra, A facility reliability problem: Formulation, properties and algorithm. *Naval Research Logistics*, 57:58 – 70, 2010.
18. A. Bassamboo, S. Kumar and R. S. Randhawa, Dynamics of new product introduction in closed rental systems. *Operations Research*, 57:1347 –1359, 2009.
19. A. Bassamboo and A. Zeevi, On a data-driven method for staffing large call centers. *Operations Research*, 57:714–726, 2009.
20. A. Bassamboo, J. M. Harrison, and A. Zeevi, Pointwise stationary fluid models for stochastic processing networks. *Manufacturing and Service Operations Management*, 11:70 – 89, 2009.
21. A. Bassamboo, S. Juneja and A. Zeevi, Portfolio credit risk with extremal dependence. *Operations Research*, 56:593–606, 2008.
22. A. Bassamboo, S. Juneja and A. Zeevi, Performance of importance sampling simulation in the presence of heavy-tails. *Operations Research Letters*, 34:521– 531, 2006.
23. A. Bassamboo, J. M. Harrison and A. Zeevi, Design and control of a large call center: Asymptotic analysis of an LP-based method. *Operations Research*, 54:419–435, 2006.
24. A. Bassamboo, J. M. Harrison and A. Zeevi, Dynamic routing and admission control in high-volume service systems: Asymptotic analysis via multi-scale fluid limits. *Queueing Systems: Theory and Applications*, 51:249-285, 2005.

Book Chapters

25. G. Allon and A. Bassamboo, Cheap talk in operations: The role of intentional vagueness, *Chapter 1 in Operations Management Models with Consumer-Driven Demand*, S. Netessine and C. Tang, editors, 2009.
26. G. Allon and A. Bassamboo, Buying from the Babbling Retailer? The Impact of Availability Information on Customer Behavior. *Chapter 12 in Forthcoming Handbook*, C. Tang and A. Ha, editors.

Submitted/Revised

27. A. Bassamboo, and A. Moreno and I. Stamatopoulos, Managing Vendor Managed Inventory Using Point-of-Sale Data. *Under Revision*
28. G. Allon, A. Bassamboo and E. Barlow, Managing Service in the presence of Labor issues. *Under Revision*.
29. G. Allon, A. Bassamboo, Q. Yu, Managing Customer Expectations and Priorities in Service Systems. *Under Revision*

30. A. Bassamboo, R. Cui, A. Moreno, The Wisdom of Crowds in Operations: Forecasting Using Prediction Markets. *Under Revision*
31. G. Allon, A. Bassamboo and E. Cil, A Service Marketplace with Multiple Classes and Multiple Skilled Agents. *Under Revision*.
32. G. Allon, A. Bassamboo and M. Lariviere, Would the Social Planner Let Bags Fly Free? *Under Revision*
33. G. Allon, A. Bassamboo and R. Randhawa, Price as a signal of product availability: Is it cheap? *Under Revision*

Work in progress/Manuscript in preparation

34. A. Bassamboo and R.S. Randhawa, Optimally Scheduling Heterogenous Impatient Customers.
35. G. Allon, A. Bassamboo, Q. Yu, Sharing Delay Information in Services: A Field Study.
36. G. Allon, A. Bassamboo, K. Hu, Understanding Customers Retrials in Call Centers: An Empirical Study.
37. A. Bassamboo, and R. S. Randhawa. Optimal Control in a Netflix-Like Closed Rental System.
38. A. Bassamboo, R. S. Randhawa and A. Zeevi, Near-optimal Control of Parallel Server Queuing Networks.

PATENTS

- A. Bassamboo, M. Gupta and S. Juneja. An efficient winner determination technique for determining winner bids in online single item, multiple units auctions, filed at USPTO, 2000.

CASE STUDY

- Mercon Coffee Nicaragua (with J. A. Van Mieghem).

TALKS AND PRESENTATIONS

Conferences

- Patience Time Based Scheduling in Multi-class Service Systems, INFORMS San Francisco, November 2014
- Using Estimated Patience Levels to Optimally Schedule Customers, INFORMS, October 2013.
- Using Estimated Patience Levels to Optimally Schedule Customers, MSOM Conference INSEAD, July 2013.
- Using Estimated Patience Levels to Optimally Schedule Customers, APS Conference, Costa Rica, July 2013.

- Using Estimated Patience Levels to Optimally Schedule Customers, EURO INFORMS Rome, July 2013.
- Would the Social Planner Let Bags Fly Free?, INFORMS Phoenix, October 2012.
- Price as a signal of product availability: Is it cheap?, MSOM Conference, Columbia University, New York, June 2012
- Near-optimal Control of Parallel Server Queueing Networks, CORS-SCRO 2012 Annual Conference, Niagara Falls, Ontario, June 2012
- Bounded Rationality in Service Systems, POMS, Chicago, April 2012
- Cheap Talk in Queues with Multiple Customer Classes, POMS, Chicago, April 2012
- Cheap Talk in Queues with Multiple Customer Classes, INFORMS Charlotte, November 2011.
- On the Accuracy of Fluid Models for Capacity Planning in Queueing Systems with Impatient Customers, INFORMS Charlotte, November 2011.
- On the accuracy of fluid models for capacity sizing in queueing systems with impatient customers, Applied Probability Society of INFORMS Conference, Stockholm, Sweden, July 2011.
- Near optimal control of parallel server queueing networks, Applied Probability Society of INFORMS Conference, Stockholm, Sweden, July 2011.
- Almost optimal control and capacity selection in parallel service systems, MSOM Conference, University of Michigan, Ross School of Business, Michigan, June 2011.
- Price as a signal of product availability: Is it cheap?, MSOM Conference, University of Michigan, Ross School of Business, Michigan, June 2011.
- Delaying the delay announcements, INFORMS Austin, November 2010.
- On the accuracy of fluid models for capacity sizing in queueing systems with impatient customers, INFORMS Austin, November 2010.
- Bounded rationality in queueing systems, MSOM, Technion, Israel June 2010.
- Accuracy of fluid models for capacity planning in queueing systems, Applied Probability Cluster, INFORMS San Diego, October 2009.
- Teaching your customers to play Nash, MSOM Cluster, INFORMS San Diego, October 2009.
- Optimal call center staffing with arrival uncertainty, Service Science Cluster, INFORMS San Diego, October 2009.
- Optimal flexibility configurations in newsvendor networks: Going beyond chaining and pairing, Applied Probability Cluster, INFORMS San Diego, October 2009.
- Accuracy of fluid models for capacity planning in queueing systems, MSOM Conference, MIT, Cambridge, June 2009.
- Cheap talk in queues, MSOM Conference, MIT, Cambridge, June 2009.
- A little flexibility is all you need: Optimality of tailored chaining and pairing, Applied Probability Cluster, INFORMS Washington DC, October 2008.

- Staffing call centers with differentiated levels of service: Approximate solutions via constraint dualization, MSOM Cluster, INFORMS Washington DC, October 2008.
- “We Will be Right with You”: Managing customers with vague promises. JFIG Finalist, INFORMS Washington DC, October 2008.
- Dynamics of new product introduction in closed rental systems. Applied Probability Cluster, INFORMS Washington DC, October 2008.
- Capacity planning in service systems with arrival rate uncertainty: Safety staffing principles revisited. Applied Probability Cluster, INFORMS Washington DC, October 2008.
- Optimal control in a Netflix-like closed rental system, MSOM, Maryland, June 2008.
- Staffing call centers with differentiated levels of service: Approximate solutions via constraint dualization, MSOM, Maryland, June 2008.
- “We Will be Right with You”: Managing customers with vague promises. MSOM, Maryland, June 2008.
- Staffing call centers with differentiated levels of service: Approximate solutions via constraint dualization, Contact Center Forum, Wharton School, February 2008.
- Dynamics of new product introduction in closed rental systems. Applied Probability Cluster, INFORMS, Seattle, November 2007.
- On the asymptotic accuracy of delay-based delay estimate. Applied Probability Cluster, INFORMS, Seattle, November 2007.
- Role of Services: Pricing, Durability and Product line. Revenue Management Cluster, INFORMS, Seattle, November 2007
- Capacity sharing, Revenue Management Cluster, INFORMS, Seattle, November 2007.
- Staffing to meet service level constraint at large call center using pointwise stationary fluid models, Applied Probability Society of INFORMS Conference, Eindhoven, The Netherlands, July 2007.
- Role of Services: Pricing, Durability and Product line. POMS, Dallas, May 2007.
- Optimal resource allocation in two stage sampling of input distributions, Winter Simulation Conference Monterey, December 2006.
- Importance sampling for reduced form models, Winter Simulation Conference, Monterey, December 2006
- Role of services, MSOM cluster, INFORMS, Pittsburgh, November 2006.
- Importance sampling for reduced form models, Applied Probability cluster, INFORMS, Pittsburgh November 2006.
- Expected shortfall in credit portfolios with extremal dependence, Winter Simulation Conference, Orlando, December 2005.
- Importance sampling simulation in the presence of heavy tails, Winter Simulation Conference, Orlando, December 2005.

- An approximately optimal data-driven call center staffing method, Applied Probability cluster, INFORMS, New Orleans/San Francisco, November 2005.
- Importance sampling for portfolio credit risk with extremal dependence, Applied Probability cluster, INFORMS, New Orleans/San Francisco, November 2005.
- Importance sampling for portfolio credit risk with extremal dependence, Applied Probability Conference, Ottawa, July 2005.
- An LP-based method for staffing and routing in large call centers, Applied Probability cluster, INFORMS, Denver, October 2004.
- Importance sampling and rare event simulation in the presence of heavy-tails, Applied Probability cluster, INFORMS, Denver, October 2004.
- Asymptotically optimal staffing and routing in large call centers, Applied Probability cluster, INFORMS, Atlanta, October 2003.
- Optimal use of manufacturing capacity options, Manufacturing and Service Operations Management Society, sponsored session, INFORMS, San Jose, October 2002.
- Constructing an optimal portfolio of capacity options, MSOM conference, Ithaca, June 2002.

Academic Institutes

- London Business School, October 2015.
- Rady School of Business, UCSD, October 2015.
- Graduate School of Business, Stanford University, October 2014.
- Rotman School of Business, University of Toronto, September 2014.
- The Fuqua School of Business, Duke University, September 2013.
- INSEAD, France, April 2012.
- College of Business at Illinois, University of Illinois at Urbana-Champaign, September 2011.
- Haas School of Business, University of California Berkeley, September 2010.
- Marshall School of Business, University of Southern California, November 2009.
- The H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology, November 2008.
- McCombs School of Business, University of Texas at Austin, November 2008
- Sloan School of Management, MIT, October 2008.
- Indian School of Business, Hyderabad, May 2008.
- Graduate School of Business, Stanford University, April 2008.
- Joint Kellogg Operations and IEMS seminar, Northwestern University, March 2008.

- Indian Institute of Technology, New Delhi, India, January 2006
- Joint Kellogg Operations and IEMS seminar, Northwestern University, October 2005
- Sloan School of Management, MIT, February 2005.
- Management Science and Engineering, Stanford University, February 2005.
- Anderson School of Management, UCLA, January 2005.
- Graduate School of Business, Columbia University, January 2005.
- Kellogg School of Management, Northwestern University, January 2005.
- Graduate School of Business, University of Chicago, January 2005.
- Stern School of Business, New York University, January 2005.
- Graduate School of Business, Stanford University, December 2004.

HONORS AND AWARDS

- Professor of the Year Award for Core Courses 2015, *Indian School of Business*.
- Faculty Impact Award for *Supply Chain Management*, Spring 2014
- Third Prize in JFIG Competition at INFORMS 2010 for the paper “*On the accuracy of fluid models for capacity sizing in queuing systems with impatient customers.*”
- Chairs’ Core Teaching Award at Kellogg School of Management for 2009-2010.
- Second Prize in JFIG Competition at INFORMS 2008 for the paper “*We will be right with you*”: *Managing customer using vague promises.*
- Robert K. Jaedicke Merit Fellowship, Graduate School of Business, Stanford University for the year 2000-2001.
- Silver Medal for obtaining the highest CGPA among the students in Mechanical Engineering at IIT Delhi.
- Institute Merit Scholarship in all the semesters for being amongst the top 7% students at IIT Delhi.
- Obtained 4th rank in Mathematica’99 (mathematics competition) held at IIT Delhi.

DOCTORAL STUDENTS

- Ioannis Stamatopoulos, co-advisor
Expected Graduation: 2016, First position: University of Texas, Austin, McCombs School of Business.
- Evan Barlow, co-advisor
Expected Graduation: 2016, First position: Weber State University, Goddard School of Business and Economics.

- Ruomeng Cui, co-advisor
Graduated: 2014, First Position: Kelly School of Business.
- Qiuping Yu, co-advisor
Graduated: 2014, First Position: Kelly School of Business.
- Eric Park, Dissertation Committee, Graduated: 2014.
- Tinglinag Huang, Dissertation Committee
Graduated: 2011, First Position: University College London.
- Eren Cil, co-advisor, “Managing service System with Self-interested Actors”
Graduated: 2010, First Position: Lundquist College of Business, University of Oregon.
- Michael Lim, co-advisor, “Supply Chain Network Design in the Presence of Disruption Risks”
Graduated: 2009, First Position: College of Business, UIUC.

SERVICE

- Associate Editor for Management Science, since 2014–
- Associate Editor for Naval Research Logistics, since 2009–
- Co-Chair for MSOM Health Care SIG, Rotman, University of Toronto, Canada, June 2015.
- Co-Chair for Applied Probability Society, Conference, June 2017.
- Faculty Recruiting Committee Chair, 2013.
- PhD Coordinator for Operations Management program, 2012–
- Organizing Committee of Kellogg Operations Workshop, 2012.
- Kellogg Research Computing Committee 2011–2012.
- Co-chair for Capacity Planning track at POMS, Chicago, April 2012.
- Untenured observer in the Kellogg’s Personnel Committee for 2010–2011.
- Cluster-Chair for APS tracks at INFORMS, Charlotte, North Carolina, November 2011.
- Co-Chair of MSOM Student Paper Competition 2011.
- Council Member of Applied Probability Society 2011–2013.
- Organizing Committee of Kellogg Operations Workshop, 2010.
- Co-Chair for MSOM Service SIG, Technion, Israel, June 2010.
- Organizing Committee of Kellogg Operations Workshop, 2008.
- Referee for Operations Research, Mathematics of Operations Research, Management Science, Manufacturing and Service Operations Management, Queueing Systems: Theory and Applications, and European Journal of Operations Research.

- Organized sessions regularly in Applied Probability track, MSOM track and RM track at INFORMS annual conference.
- Organized a session at POMS, Dallas, May 2007.
- Judge for MSOM student paper competition for 2007, 2008 and 2009, 2013
- Majors Presentation to the Kellogg incoming students 2006 and 2007

TEACHING

- Operations Management (Core Class for MBA and EMBA)
- Statistical Decision Analysis (Core Class for EMBA)
- Retail Operations and Supply Chain (Elective for EMBA)
- Supply Chain Management (Elective for MBA)
- Decision Models & Optimisation (Core class for MBA at ISB)