

CURRICULUM VITAE

Mor Armony

Associate Professor of Operations Management
Stern School of Business
New York University
marmony@stern.nyu.edu
<http://www.stern.nyu.edu/om/faculty/armony/>

Education

- **Stanford University.**
Ph.D. In Engineering-Economic Systems and Operations Research (December 1999).
Thesis Title: *Queueing Networks with Interacting Service Resources.*
- **Stanford University.**
M.S. in Engineering-Economic Systems and Operations Research (June 1997).
- **The Hebrew University of Jerusalem.**
M.S. in Statistics, Summa Cum Laude (June 1996).
Thesis Title: *Nash Equilibrium in a Duopoly model with waiting lines.*
- **The Hebrew University of Jerusalem.**
B.S. in Mathematics and Statistics, Summa Cum Laude (June 1993).
Thesis topic: *Statistical analysis of the Slippage of Replication Phenomenon in DNA.*

Research

- **General Research Interests:** Stochastic processing networks with applications to large-scale service centers, inventory management in supply chain, and resource allocation in information systems.
- **Stern School of Business, NYU.**
Associate (9/07-Present) & Assistant (9/99-8/07) Professor: Studying resource allocation problems in Supply Chains and Information Systems, and the management of large flexible Service Operations.
- **Technion Institute of Technology, Haifa, Israel.**
Visiting Assistant Professor: Studied large-scale service systems such as customer contact centers. 9/02-8/03.
- **Lucent Technologies. Bell Labs Innovations, Murray Hill, NJ.**
Consultant: Analyzed network data as part of a traffic engineering project. In particular, the work involved statistical modelling and profiling of data traffic in a local area network. 7/98-9/98.
- **AT&T Labs, Holmdel, NJ.**
Summer Intern: Designed and evaluated network models. Specifically, developed heuristics to solve a large scale Integer Programming problem, and wrote C programs to implement and test them. 6/96-8/96.

- **Stanford University**, Stanford, CA.
Research Assistant: Applied queueing networks theory to telecommunication, manufacturing, and service systems. In particular, integrating concepts of this theory into problems that involve scheduling of shared service resources. 9/96-7/99.
- **Eventus**, Tel Aviv, Israel. (A consulting firm specializing in financial models).
Research Assistant: Developed and analyzed Time Series models for predicting future exchange rates. The models were based on the statistical analysis of large databases. 10/93-6/94.
- **The Hebrew University of Jerusalem**, Jerusalem, Israel.
Research Assistant: Analyzed statistical features of DNA sequences as part of a research program on the “Slippage of Replication” phenomenon. 7/92-2/93.

Teaching

- **Stern School of Business, NYU**, NY, USA.
Associate & Assistant Professor:
 - Undergraduate Core Course: “Competitive Advantage from Operations”.
 - MBA Core Course: “Competitive Advantage from Operations”.
 - Doctoral Courses:
 - ‘Special Topics in Operations Management: Stochastic Models’.
 - ‘Stochastic Modeling in Operations Management’.
 - ‘Special Topics in Operations Management: Stochastic Service Systems’.
- **Stanford University**, Stanford, CA, USA.
Teaching assistant: Queueing Systems Modelling and Analysis (doctoral course). 9/97-12/97.
- **The Hebrew University of Jerusalem**, Jerusalem, Israel.
Teaching Assistant: Statistics and Programming in SAS (undergraduate course). 10/92-6/95.
- **Sydney University**, Sydney, NSW, Australia.
Teaching Assistant: Deterministic and stochastic models in Operations Research (undergraduate course). 7/94-10/94.
- **The National Center for University Scholastic Tests**, Jerusalem, Israel.
Evaluator: Composed and evaluated test questions for the quantitative and analytical sections. 10/92-9/95.

Published and Accepted Papers

- Armony M., Bambos N., (1999) "Queueing Networks with Interacting Service Resources", *Proceedings of the 37th Annual Allerton Conference on Communication, Control, and Computing*, 42-51.
- Armony M., Klincewicz J., Luss H., Rosenwein M., (2000) "Design of Stacked Self-Healing Rings Using a Genetic Algorithm", *Journal of Heuristics*, **6**, 85-105.
- Armony M. and Haviv M., (2003) "Price and Delay Competition between Two Service Providers", *The European Journal of Operational Research*, **147**(1) 32-50.
- Armony M. and Bambos N., (2003), "Queueing Dynamics and Maximal Throughput Scheduling in Switched Processing Systems", *Queueing Systems*, **44**, 209-252.
- Armony M. and Maglaras C., (2004) "On Customer Contact Centers with a Call-Back Option: Customer Decisions, Routing Rules and System Design", *Operations Research*, **52**(2), 271-292.
- Armony M. and Maglaras C., (2004) "Contact Centers with a Call-Back Option and Real-Time Delay Information", *Operations Research*, **52**(4), 527-545.
- Armony M. and Plambeck E., (2005) "The Impact of Duplicate Orders on Demand Estimation and Capacity Investment", *Management Science*, **51**(10), 1505-1518.
- Armony, M., (2005) "Dynamic routing in large-scale service systems with heterogeneous servers", *Queueing Systems, Special Issue: Stochastic Networks* (ed. P. Glynn) **51**(3-4), 287-329.
- Gurvich, I., Armony, M. and Mandelbaum, A., (2008) "Service level differentiation in call centers with fully flexible servers", *Management Science, Special Issue on Call Center Management* (ed. G. Koole), **54**(2), 279-294.
- Armony M., Plambeck E. and Seshadri S., (2009) "Sensitivity of Optimal Capacity to Customer Impatience in an Unobservable M/M/S Queue (Why You Shouldnt Shout at the DMV)", *Manufacturing & Service Operations Management*, **11**(1) 19-32.
- Aksin, Z., Armony, M., Mehrotra, V., (2007) "The Modern Call-Center: A Multi-Disciplinary Perspective on Operations Management Research", *Production and Operations Management, Special issue on Service Operations in honor of John Buzacott* (ed. G. Shanthikumar and D. Yao) **16**(6), 665-688. (Invited paper).
- Armony M., Shimkin N. and Whitt W., (2009) "The Impact of Delay Announcements in Many-Server Queues with Abandonment", *Operations Research*, **57**(1) 66-81.
- Gurvich I., Armony M., and Maglaras C. (2009) "Cross-Selling in a Call Center with a Heterogeneous Customer Population", *Operations Research*, **57**(2) 299-313.
- Armony M. and Gurvich I. (2006) "When Promotions Meet Operations: Cross-selling and Its Effect on Call-Center Performance", *Manufacturing & Service Operations Management*, forthcoming.
- Armony, M. and Ward, A. (2008) "Fair Dynamic Routing in Large-Scale Heterogeneous-Server Systems", *Operations Research*, forthcoming.

- Armony, M. and Mandelbaum, A., (2008) “Routing and Staffing in Large-Scale Service Systems: The Case of Homogeneous Impatient Customers and Heterogeneous Servers”, *Operations Research*, forthcoming.

Honors, Awards and Distinctions

- United States - Israel Binational Science Foundation (BSF) Grant recipient. 2007-2011.
- First prize winner, Junior Faculty Interest Group (JFIG) Paper Award, INFORMS 2006.
- Co-advisor of Itay Gurvich (jointly with Costis Maglaras) who won the first prize at the M&SOM Student Paper Competition, INFORMS 2006.
- United States - Israel Binational Science Foundation (BSF) Grant recipient. 2003-2007.
- Finalist, Junior Faculty Paper Award, INFORMS 2003.
- A Visiting Scientist Fellowship, Technion, Israel Institute of Technology. 2002.
- Fellowship, The Operations Research Department, Stanford University. 1995.
- Fulbright Scholarship, United States - Israel Educational Foundation. 1995. (Declined).
- Wolf’s Fund Award for outstanding masters students. 1994.
- Valedictorian, School of Natural Sciences, The Hebrew University of Jerusalem, class of 1992.
- Provost’s Award for top ranking students in the Hebrew University for 1990, 1991, 1992.
- The Dean’s award for top ranking students in the School of Natural Sciences, The Hebrew University of Jerusalem. 1990, 1991, 1992.
- The Michael Patay Award for top ranking bachelor students, in the school of Natural Sciences, The Hebrew University of Jerusalem. 1990, 1991, 1992.
- The Israeli Parliament award for top ranking bachelor students in the country. 1992.
- Participated in ‘Amirim’ Program for outstanding bachelor students in the School of Natural Sciences, The Hebrew University of Jerusalem. 1990-1993.

Professional Service

- **Editorial Board Member** for *Management Science*, *Operations Research*, *Production and Operations Management*, *Queueing Systems* (2008), *Stochastic Systems* (new INFORMS journal) *Manufacturing & Service Operations Management* (2004-2005), *International Journal of Operational Research*, and *Flexible Services and Manufacturing*.
- **Reviewer** for *Operations Research*, *Management Science*, *Manufacturing & Service Operations Management*, *Queueing Systems*, *Mathematics of Operations Research*, *Annals of Applied Probability*, *Annals of Operations Research*, *European Journal of Operational Research*, *Telecommunication Systems*, *Transactions on Automatic Control*, *Probability in the Engineering and Informational Sciences*, *Naval Research Logistics*.
- **Council member** of the Applied Probability Society of INFORMS (Term 2005-2007)
- **Cluster chair** for *Applied Probability* and *Global Services Sourcing*, INFORMS, Pittsburgh (November 2006).
- **Program Committee Member**, The Applied Probability INFORMS Conference, Eindhoven, The Netherlands (July 2007) and Cornell (July 2009).
- **Judge**, M&SOM Student Paper Competition (2006, 2007).

Invited and Refereed Conference Talks

- Armony M. and Ward A., “Fair Dynamic Routing in Large-Scale Heterogeneous-Server Systems”, M&SOM Service SIG conference, College Park (June 2008).
- Armony M., Gurvich I. and Maglaras C., “Cross-Selling in Call Centers”, SOLI, Philadelphia (August 2007).
- Armony, M. and Gurvich I., “When Promotions Meet Operations: Cross-selling and Its Effect on Call-Center Performance”, Junior Faculty Paper Award Finalists Presentations, INFORMS Annual Meeting, Pittsburgh. (November 2006).
- Haviv, M. “On Balking from an Empty Queue”, *Discussant*, CRES-Competition with Delays: Queueing Games conference, Washington University. (September 2005).
- Armony M. “Managing Large Multi-Skill Call-Centers”, Stochastic Networks Conference, Montreal, Canada. (July 2004).
- Armony M. and Maglaras C., “Managing Callbacks in Call-Centers”, Call-Center Forum, Wharton, University of Pennsylvania. (May 2003).
- Armony M. and Maglaras C., “Service Networks with Channel and Service Level Flexibility”, International Conference on Stochastic Optimization and Adaptation. Cochin University of Science and Technology, Kerala, India. (December 2000).
- Bambos N. and Armony M. “Queueing Models and Problems in Wireless Network Control”, Conference on Stochastic Networks. Madison, Wisconsin. (June 2000).
- Armony M. and Bambos N., “Queueing Networks with Interacting Service Resources”, 37th Annual Allerton Conference on Communication, Control, and Computing. Monticello, Illinois. (September 1999).

- Armony M. and Bambos N., “Queueing Networks with Interdependent Resources”, Oberwolfach Workshop on Applied Probability, Mathematisches Forschungsinstitut Oberwolfach. (December 1998).

Organized and Contributed Conference Talks

- Armony M. and Mandelbaum A., “Staffing and Routing in Large-Scale Service Systems with Heterogeneous-Servers”, INFORMS Annual Meeting, San Diego. (October 2009).
- Armony M. and Ward A., “Blind Fair Routing in Large-Scale Service Systems”, INFORMS Annual Meeting, San Diego. (October 2009).
- Armony M. and Ward A., “Blind Fair Routing in Large-Scale Heterogeneous-Server Systems”, INFORMS Applied Probability conference, Ithaca. (July 2009).
- Armony M. and Ward A., “Fair Dynamic Routing in Large-Scale Heterogeneous-Server Systems”, INFORMS Annual Meeting, Washington DC. (October 2008).
- Armony M. and Bassamboo A., “On the Accuracy of Announcing the Delay of Last to Enter Service in Large Call Centers”, INFORMS Annual Meeting, Seattle. (November 2007).
- Armony M. and Ward A., “Fair Dynamic Routing Policies in Large-scale Service Systems with Heterogeneous Servers”, INFORMS Annual Meeting, Seattle. (November 2007).
- Armony M., Gurvich I. and Maglaras C., “Cross-Selling in Call Centers”, INFORMS Applied Probability conference, Eindhoven, The Netherlands. (July 2007).
- Armony M., Gurvich I. and Maglaras C., “Cross-Selling in Call Centers with Heterogeneous Customers”, INFORMS Annual Meeting, Pittsburgh. (November 2006).
- Armony M. and Mandelbaum A., “Routing and Staffing in Service Systems with Heterogeneous Servers and Impatient Customers”, INFORMS Annual Meeting, Pittsburgh. (November 2006).
- Armony M., Gurvich I. and Maglaras C., “Cross-Selling in Call Centers with Heterogeneous Customers”, M&SOM Annual Conference, Atlanta. (June 2006).
- Armony M. and Xue M., “Panel Discussion: On the Interface between Marketing and Service Operations Management”, Session chairs, INFORMS Annual Meeting, San Francisco. (November 2005).
- Armony M., Shimkin N. and Whitt W., “The impact of delay announcements in many-server queues with abandonment”, INFORMS Annual Meeting, San Francisco. (November 2005).
- Armony M. and Gurvich I., “Cross-selling in Service Focused Call Centers: Staffing, Control and Performance Analysis”, INFORMS Annual Meeting, San Francisco. (November 2005).
- Armony M., Plambeck E. and Seshadri S., “Convexity Properties and Comparative Statics for M/M/S Queues with Balking and Reneging”, INFORMS Annual Meeting, San Francisco. (November 2005).
- Armony M. and Torzhkov A., “Staffing of Service Systems with Arrival Rate Forecast Evolution”, 13th INFORMS Applied Probability Conference, Ottawa, Canada. (July 2005).

- Armony M. and Gurvich I., “When Promotions Meet Operations: Cross-Selling and its Effect on Call-Center Performance”, MSOM annual conference, Northwestern University. (June 2005).
- Gurvich I., Armony M., and Mandelbaum A., “Staffing and Routing in Large-Scale Service Systems”, POMS conference on services, Columbia University. (December 2004).
- Gurvich I., Armony M., and Mandelbaum A., “Staffing and Control of Large Service Systems: The Case of Multiple Customer Classes and Fully Flexible Servers”, INFORMS, Denver. (October 2004).
- Armony M. and Mandelbaum A., “On managing large-scale multi-skill call-centers: System design, agent staffing and call routing”, ORSIS, Israel. (May 2003).
- Armony M. and Maglaras C., “Flexible Service Systems with Delay Information”, INFORMS, San-Jose. (November 2002).
- Armony M. and Plambeck E., “The Impact of Duplicate Orders on Demand Estimation and Capacity Investment”, M&SOM, Cornell. (June 2002).
- Armony M. and Plambeck E., “Parameter Estimation in Distribution Channels with Double Ordering”, INFORMS, Miami Beach. (November 2001).
- Armony M. and Bambos N., “Skills Based Routing in Call Centers: Adaptive Batching Policies”, INFORMS, Miami Beach. (November 2001).
- Armony M. and Maglaras C., “On the Call Back Option in Customer Contact Centers”, INFORMS Applied Probability Society Conference. (July 2001).
- Armony M. and Maglaras C., “Service networks with channel and service level flexibility”, INFORMS, San Antonio. (November 2000).
- Armony M. and Bambos N., “Dynamic Cone Policies for Skilled Based Routing in Call Centers”, INFORMS Telecommunications Conference, Boca Raton. (March 2000).
- Armony M. and Bambos N., “Dynamic Cone Policies for Queueing Networks with Interacting Resources”, INFORMS, Philadelphia. (November 1999).
- Armony M. and Bambos N., “Power Control and QoS in Wireless Communication Networks”, INFORMS, Cincinnati, Ohio. (May 1999).
- Armony M. and Bambos N., “Queueing in Interfering Resource Environment”, INFORMS, Tel Aviv. (June 1998).
- Armony M. and Bambos N., “Allocation of Interdependent Resources in Queueing Systems - Applications to Wireless Networks”, INFORMS Telecommunications Conference, Boca Raton. (March 1998).
- Armony M., Klinecicz J., Luss H. and Rosenwein M., “Design of Stacked Self-Healing Rings Using a Genetic Algorithm”, INFORMS Telecommunications Conference, Boca Raton. (March 1998).