

Abbreviated CV
SAIF BENJAAFAR¹
Distinguished McKnight University Professor
Department of Industrial and Systems Engineering
University of Minnesota
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Professional Experience

- Distinguished McKnight University Professor, University of Minnesota, 2011-present
- Head, Department of Industrial and Systems Engineering, University of Minnesota, 2018-present
- Founding Head of Pillar (at the rank of Dean) and Professor, Engineering Systems and Design, Singapore University of Technology and Design (SUTD), 2011-2014
- Director, Initiative on the Sharing Economy, University of Minnesota, 2015-present
- Advisor to Singapore University of Technology and Design (SUTD) and Fellow of the MIT-SUTD International Design Center, 2014-2017
- Founding Director, Department of Industrial and Systems Engineering (formerly the Program in Industrial and System Engineering), University of Minnesota, 2008-2011
- Professor, Department of Industrial and Systems Engineering, University of Minnesota, 2002-present
- Director, Center for Supply Chain Research, University of Minnesota, 2002-2015
- Director, Division of Industrial & Systems Engineering (a Division of the Department of Mechanical Engineering), University of Minnesota, 1997-2008
- Co-Director, Manufacturing Systems Engineering Program, 1999-2002
- Associate Professor, Division of Industrial & Systems Engineering, Department of Mechanical Engineering, University of Minnesota, 1997-2002
- Nelson Assistant Professor, Division of Industrial & Systems Engineering, Department of Mechanical Engineering, University of Minnesota, 1992-1997

Education

- Ph.D., Purdue University, School of Industrial Engineering, 1992
- M.S., Purdue University, School of Industrial Engineering, 1989
- B.S., University of Texas at Austin, Department of Electrical Engineering, 1987

Board Membership

- Member of the Board of Directors, HourCar, 2017-present
- Advisor to the Qatar Foundation, 2017-present
- Member of the Technology Advisory Board, Keppel Corporation, Singapore, 2014-2016

Visiting Appointments

- Visiting Professor, Department of Management Sciences, Shanghai University of Finance and Economics, 2016
- Visiting Professor, Department of Management Sciences, City University of Hong Kong, 2009, 2011 and 2015
- Visiting Professor, Laboratoire Génie Industriel, Ecole Centrale Paris, France, 2003 and 2010-2014

¹ A detailed CV is available upon request; see also personal website: <https://benjaafar.com/>.

- Guest Professor, School of Management, University of Science and Technology, Hefei, China, 2010-2013
- Visiting Professor, Business School, Hong Kong University of Science and Technology, 2008
- Visiting Fellow, Faculty of Applied Economics, Katholieke Universiteit Leuven, Belgium, 2007
- Visiting Fellow, Logistics Institute-Asia Pacific, National University of Singapore, 2005
- Visiting Professor, Department of Industrial Engineering and Engineering Management, Hong Kong University of Science and Technology, 2004
- Distinguished Visiting Senior Scientist, Honeywell Laboratories, Minneapolis, Minnesota, 2002

Other Affiliations

- Senior Faculty Scholar, Center for Transportation Studies, University of Minnesota, 2008-present
- Fellow, Institute on the Environment, University of Minnesota, 2016-present
- Faculty Affiliate, Center for Digital Technology, University of Minnesota, 2017-present
- Faculty Affiliate, Institute of Mathematics and its Applications (IMA), University of Minnesota, 2017-present
- Member, Graduate Faculty of the Department of Civil Engineering, University of Minnesota, 2019-present

Research Interests

Broad research interests in operations management, supply chains, and service systems. Current research focus is on sustainable operations and innovative business models, including sharing economy and on-demand services

Selected Publications²

- Benjaafar, S., G. Kong and X. Li, “Peer-to-Peer Product Sharing: Implications for Ownership, Usage and Social Welfare in the Sharing Economy,” *Management Science*, 65, 477–493, 2019 (**Featured article and Top 10 most downloaded papers at *Management Science*; top 1% most downloaded article at SSRN**).
- Benjaafar, S. and H. Ming, “Operations Management in the Age of the Sharing Economy: What is Old and what is New,” forthcoming in *Manufacturing and Service Operations Management*, 2019 (**Invited Paper for MSOM 20th Anniversary Special Issue**).
- Benjaafar, S., D. Chen and R. Wang, “Managing Production-Inventory Systems with Scarce Resources,” *Manufacturing and Service Operations Management*, 19, 216–229, 2017 (**Winner of the INFORMS Section on Energy, Natural Resources, and the Environment Best Student Paper Award; POMS-HK Best Student Paper Award, Finalist**).
- Yu, Y., S. Benjaafar and Y. Gerchak, “On Service Capacity Pooling and Cost Sharing among Independent Firms,” *Production and Operations Management*, 24, 1285–1310, 2015 (**Winner of the IIE Pritsker Best Doctoral Dissertation Award**).
- Wang, Y., O. Jouini and S. Benjaafar, “Service Systems with Finite and Heterogeneous Customer Arrivals,” *Manufacturing and Service Operations Management*, 16, 365-380, 2014 (**Winner of the IIE Pritsker Best Doctoral Dissertation Award**).
- Chen, X. and S. Benjaafar, “The Carbon-Constrained EOQ,” *Operations Research Letters*, 41, 172-179, 2013 (**Most cited paper in the journal for the period 2010-2016; most downloaded papers in 2013-2016**). The paper has been listed as a **Highly Cited Paper** by ISI Thomson Reuters for receiving “enough citations to place it in the top 1% of the academic field of Engineering based on a highly cited threshold for the field and publication year.”
- Hua, Z., W. Zhang and S. Benjaafar, “Optimal Inventory Control with Heterogeneous Suppliers,” *Production and Operations Management*, 21, 564-575, 2012.

² Among over 50 journal papers

- Benjaafar, S., Y. Li and M. Daskin, “Carbon Footprint and the Management of Supply Chains: Insights from Simple Models,” *IEEE Transactions on Automation Science and Engineering*, 10, 99-116, 2013 (**Invited article for the Special Issue on Green Manufacturing; Most downloaded papers in 2013-2016; Top 10 all time most cited papers for the journal**). The paper has been listed as a **Highly Cited Paper** by ISI Thomson Reuters for receiving “enough citations to place it in the top 1% of the academic field of Engineering based on a highly cited threshold for the field and publication year.”
- Benjaafar, S., M. Elhafsi, C. Y. Lee and W. Zhou, “Optimal Control of Assembly Systems with Multiple Stages and Multiple Demand Classes,” *Operations Research*, 59, 522–529, 2011.
- Benjaafar, S., W. L. Cooper and S. Mardan, “Production-Inventory Systems with Imperfect Advance Demand Information and Updating,” *Naval Research Logistics*, 58, 88-106, 2011 (**Winner of the Harold W. Kuhn Award, 2012**).
- Gayon, J. P., S. Benjaafar and F. de Véricourt, “Using Imperfect Demand Information in Production-Inventory Systems with Multiple Demand Classes,” *Manufacturing and Service Operations Management*, 11, 128-143, 2009 (**Winner of the M&SOM Best Paper Award, 2011**). An article authored by Jeannette Song highlighting the contributions of the paper appeared in *Manufacturing and Service Operations Management*, 13, 419, 2011.
- Hu, B. and S. Benjaafar, “On Server Partitioning in Queueing Systems during Rush Hour,” *Manufacturing and Service Operations Management*, 11, 416-428, 2009 (featured in **Focus on Queueing Systems**, a collection of papers published by INFORMS Online in 2013).
- Gaglioppa, F., L. Miller and S. Benjaafar, “Multi-Task and Multi-Stage Production Planning and Scheduling for Process Industries,” *Operations Research*, 56, 110-1025, 2008.
- Benjaafar, S., Y. Li, D. Xu and S. Elhedhli, “Demand Allocation in Systems with Multiple Inventory Locations and Multiple Demand Sources,” *Manufacturing and Service Operations Management*, 4, 43-60, 2008.
- Benjaafar, S., E. Elahi and K. Donohue, “Outsourcing via Service Quality Competition,” *Management Science*, 53, 241-259, 2007.
- Benjaafar, S. and M. Elhafsi, “Production and Inventory Control of a Single Product Assemble-to-Order System with Multiple Customer Classes,” *Management Science*, 52, 1896-1912, 2006.
- Benjaafar, S., William L. Cooper and J. S. Kim, “On the Benefits of Pooling in Production-Inventory Systems,” *Management Science*, 51, 548-565, 2005.
- Benjaafar, S., M. Elhafsi and F. de Véricourt, “Demand Allocation in Multi-Product, Multi-Facility Make-to-Stock Systems,” *Management Science*, 50, 1431–1448, 2004.
- Benjaafar, S., “Modeling and Analysis of Congestion in the Design of Facility Layouts,” *Management Science*, 48, 679-204, 2002.
- Kim, J. S. and S. Benjaafar, “Extended Abstract: On the Benefits of Inventory Pooling in Production-Inventory Systems,” *Manufacturing and Service Operations Management*, 4, 12-16, 2002 (**M&SOM Best Student Paper Award, Honorable Mention**).
- Lahmar, M., Hakan, E. and S. Benjaafar, “Extended Abstract: Resequencing and Feature Assignment on a Moving Assembly Line,” *Manufacturing and Service Operations Management*, 3, 7-9, 2001 (**M&SOM Best Student Paper Award, Honorable Mention**).

Selected Awards and Recognitions

- McKnight Distinguished University Professor Award, University of Minnesota
- The George Taylor/IT Alumni Society Distinguished Teaching Award, University of Minnesota
- Bill & Melinda Gates Foundation Grand Challenges Award
- MSOM Best Paper Award (awarded by the MSOM Society for the best paper published in MSOM in the previous three years)
- Harold W. Kuhn Award (awarded annually to an exceptional paper published in *NRL* during the previous three years)
- INFORMS Distinguished Service Award
- Fellow of the Institute of Industrial Engineers

- Best paper awards from INFORMS, POMS, and IIE, among others

Recent Keynote speeches

- Master Forum Address (a university-wide seminar series), Chinese University of Hong Kong-Shenzhen, China, May 21, 2020
- Keynote Speaker, International Workshop on Behavioral Operations Management, Beijing, China, December 14-15, 2019
- Keynote Speaker, International Forum on the Sharing Economy, Seoul, South Korea, October 10, 2019
- Panelist, New Faculty Colloquium, INFORMS Annual Meeting, October 18, 2019
- Keynote Speaker, Workshop on Revenue Management and Sharing Economy, Singapore University of Technology and Design, Singapore, June 28, 2019
- Keynote Speaker, INFORMS Service Science Conference, Nanjing, China, June 27-29, 2019
- Keynote Speaker, XI International Environmental Congress, Bogota, Colombia, October 24-28, 2018
- Panelist, INFORMS Analytics and Government Summit, May 24, 2018
- Plenary Speaker, Johns Hopkins Conference on Crowdsourcing in the Sharing Economy, A Multidisciplinary Perspective, Baltimore, Maryland, April 20-21, 2018

Recent Invited University Seminars

- Desautels Faculty of Management, McGill University, November 22, 2019
- Department of Industrial and Systems Engineering, Rutgers University, November 12, 2019
- W. P. Carey School of Business, Arizona State University, November 1, 2019
- Department of Industrial and Systems Engineering, University of Illinois at Urbana-Champaign, April 23, 2019
- Digital Technology Center, University of Minnesota, April 2, 2019
- Heinz School of Information Systems and Public Policy, Carnegie Mellon University, December 3, 2018
- Weatherhead School of Management, Case Western Reserve University, Cleveland, Ohio, October 10, 2018
- Department of Integrated Systems Engineering, Ohio State University, Columbus, Ohio, September 26, 2018
- Carey Business School, Johns Hopkins University, Baltimore, Maryland, April 21, 2018
- School of Management, University College London, London, UK, February 23, 2018
- Operations Research and Industrial Engineering Graduate Program, University of Texas at Austin, Austin, Texas, October 20, 2017
- Ivey Business School, University of Western Ontario, Ontario, Canada, October 13, 2017
- McDonough School of Business, Georgetown University, Washington, DC, March 17, 2017
- Paul Merage School of Business, University of California at Irvine, Irvine, California, March 10, 2017
- Department of Industrial Engineering, Purdue University, West Lafayette, February 1, 2017 (Inaugural Distinguished Seminar Speaker)
- Columbia Graduate School of Business, Columbia University, New York, October 20, 2016
- Stern School of Business, New York University, New York, October 10, 2016
- Judge Business School, Cambridge University, Cambridge, UK, March 18, 2016
- London Business School, London, UK, March 17, 2016
- Said School of Business, Oxford University, Oxford, UK, March 16, 2016
- School of Business, National University of Singapore, June 8, 2016

Recently Funded Projects

- “Leveraging Autonomous Shared Vehicles for Greater Community Health, Equity, Livability, and Prosperity (HELP),” NSF, Co-PI, **\$1,750,000**, 9/01/2018-8/30/2021

- “Equitable Access to Healthcare Through Improved Access to Transportation,” Hennepin County-University Partnership, PI, **\$50,000**, 2/1/2020-1/31/2021
- “Improving Infant Vaccination Rates through Transportation Network Providers,” Bill & Melinda Gates Foundation, Co-PI, **\$100,000** (Phase I), 11/01/2017-04/01/2019
- “Industrial Mathematics Clinic: Tackling Collaboratively Emerging Problems in Industry,” NSF, PI, **\$200,000** (Sub-award from the Institute on Mathematics and its Applications), 11/01/2016-8/30/2018
- “Initiative on the Sharing Economy,” Center for Transportation Studies, University of Minnesota, PI, **\$500,000**, 7/1/2015-present
- “Peer-to-Peer Sharing Economy with Application to Shared Mobility,” Singapore Ministry of Education, Co-PI, **SS\$564,000**, 09/01/2017-8/30/2020
- “Demand Focused Smart Energy Management in End User Environments for Sustainable Cities,” Singapore National Research Foundation & Singapore Energy Management Authority, Co-PI, **SS\$2,285,582**, 1/1/2013-12/31/2018
- “Design and Operation of Sustainable Supply Chains,” Singapore Ministry of Education, PI, **SS\$200,000**, 1/1/2012-12/31/2015
- “Analysis and design of closed loop low carbon supply chains,” Qatar National Research Foundation, PI on Sub-Award from Qatar University, **\$726,000**, 8/1/2012-7/31/2015
- “Design of Sustainable Supply Chains,” MIT-SUTD International Design Center, PI, **SS\$700,000**, 6/1/2012-6/30/2015
- “Appointment scheduling in Specialist Outpatient Clinics,” Singapore Changi General Hospital, Co-PI, **SS\$100,000**, 7/1/2014-6/30/2015
- “Optimizing the Supply Chain for Cost and Carbon Footprint,” NSF, PI, **\$375,000**, 8/1/09-7/31/12
- “Safety and Defense of the Food Supply Chain,” DHS, PI on sub-award from National Center for Food Safety and Defense, **\$410,000**, 1/01/10-6/31/11

Recent Journal Editorial Activities

- Editor-in-Chief, *Service Science*, 2019-present
- Editor, Special Issue on “Sharing Economy and Innovative Marketplaces,” *Manufacturing and Service Operations Management*, 2017-2020
- Editor, Special Issue on “Urban Computing and Smart Cities,” *ACM Transactions on Data Science*, 2019-2021
- Associate Editor, *Manufacturing and Service Operations Management*, 2004-2006 and 2009-present
- Senior Editor, *Production and Operations Management*, 2006-2015
- Associate Editor, *Naval Research Logistics*, 2007-present

Recent Conference Organization

- Co-Chair, NSF-IMA *Industrial Mathematics Clinic: Tackling Collaboratively Emerging Problems in Industry*, Minneapolis, Minnesota, July 24-August 11, 2017
- General Chair, *INFORMS International Conference*, Hawaii, June 2016
- Chair, *Symposium on the Sharing Economy*, University of Minnesota, May 2016
- Chair, *Annual Conference of the MSOM Sustainable Operations Special Interest Group*, Columbia University, New York, June 2012
- Chair, *NSF Symposium on the Low Carbon Footprint Supply Chain*, Washington DC, October 2010

Recent Industry Collaboration and Consulting

Hitch Health, Stratasys, Boston Scientific, Accenture, World Bank, Mayo Clinic, Hourcar, C.H. Robinson, Car2Go, Target, Keppel Corporation, Walmart, World Bank, Mayo Clinic, OCBC, iCars, AirBnB, Singapore CGH Hospital, Fairview Hospitals, Adventium, General Mills, 3M, Ford, GE, Honeywell, Intel, Infineon, Port of Singapore Authority, and DHL

Students Supervised

Doctoral and postdoctoral students supervised

- David Chen, Assistant Professor, Chinese University of Hong Kong-Shenzhen
- Rowan Wang, Assistant Professor, Singapore Management University
- Yimin Yu, Associate Professor, City University of Hong Kong
- Oualid Jouini, Professor, Ecole Centrale Paris
- Tara Mardan, Senior Research Scientist, Amazon
- Ehsan Elahi, Associate Professor, University of Massachusetts
- Maher Lahmar, Head, Data Science for Google Marketing Solutions, (previously on the faculty of the University of Houston)
- Soumaya Ben Aicha, Assistant Professor, ENIT
- Mehdi Sheikhzadeh, Associate Professor, Sharif University
- Morteza Pourabkar, Associate Professor, Erasmus University
- Adel Elomri, Assistant Professor, Qatar University
- Xi Chen, Assistant Professor, University of Michigan-Dearborn
- Shisheng Huang, Research Scientist, Singapore University of Technology and Design
- Jian-Ya Ding, Data Scientist, Ali Baba
- Behrooz Pourghannad, Research Fellow, IMA and Mayo Clinic

Current doctoral and postdoctoral students

- Hanlin Li (Postdoctoral Fellow)
- Shihong Xiao (Postdoctoral Fellow)
- Bingna Lu
- Nathaniel Witte
- Xiaotang Yang

Other students supervised

- Tinglinag Huang, Associate Professor, Boston University
- Bin Hu, Associate Professor, University of Texas at Dallas
- Current doctoral and postdoctoral students

Recent courses taught (at the University of Minnesota unless otherwise noted)

- Operations Management (Undergraduate/Graduate), Singapore University of Technology and Design
- Engineering Systems Design (Undergraduate), Singapore University of Technology and Design
- Stochastic Inventory Theory (Graduate)
- Supply Chain Management (Graduate)
- Production and Inventory Control (Undergraduate/Graduate)
- Manufacturing Operations and Strategy (Graduate)
- Stochastic Inventory Theory (Graduate), Hong Kong University of Science and Technology
- Stochastic Models in Operations Research (Undergraduate), Hong Kong University of Science and Technology
- Stochastic Inventory Theory (Graduate), City University of Hong Kong

Recent Media mentions

Fortune Magazine, CNBC, AFP, China Daily, BusinessWeek, Huffington Post, Morning Consult, Twin Cities Pioneer Press, Minnesota Daily, NPR, Le Temps, Singapore Straits Times, Channel News Asia, among others (links to related stories can be found here: <https://wordpress.com/view/benjaafar.com>)

Recent University Service

- Chair, College of Science and Engineering, Tenure and Promotion Committee
- Member, College of Science and Engineering, Tenure and Promotion Committee

- Member, Institute of Mathematics and its Applications (IMA), Committee on the Future of the IMA
- Member, Working Group on Grand Challenges (Enhancing Individual and Community Capacity for a Changing World), Office of the Provost
- Faculty Mentor, President's Distinguished Faculty Mentor Program
- Member, Faculty Scholars Program Evaluation Committee, Center for Transportation Studies
- Member, University McKnight Professorship Award Committee