Mohammad Delasay

Contact Information

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Profile Links

Personal webpage link, Google Scholar link, LinkedIn link

Academic Positions

Associate Professor of Operations Management — Sep. 2023-Present
Assistant Professor of Operations Management — Aug. 2017-Aug. 2023
Stony Brook University College of Business

Visiting Assistant Professor of Operations Management — Sep. 2014-Jul. 2017
Carnegie Mellon University Tepper School of Business

Education

Ph.D. in Operations Management, University of Alberta School of Business — 2014

Visiting Pre-doctoral Fellow, Northwestern University Kellogg School of Management — Summer 2014

M.Sc. in Industrial Engineering, University of Tehran — 2006

B.Sc. in Industrial Engineering, Azad University of Tehran — 2003

Refereed Journal Publications

Somashekar G, M Delasay, A Gandhi. 2023. Efficient and accurate Lyapunov function-based truncation technique for multi-dimensional Markov chains with applications to discriminatory processor sharing and priority queues. *Performance Evaluation* 162.

Kang K, S Doroudi, M Delasay, A Wicheham. 2023. A queueing-theoretic framework for evaluating transmission risks in service facilities during a pandemic. *Production and Operations Management* 32(5) 1453–1470.

- POMS College of Humanitarian Operations and Crisis Management (HOCM) Best Paper Award, POMS 2022

Singh SP, M Delasay, AA Scheller-Wolf. 2023. Real-time delay announcement under competition. *Production and Operations Management* 32(3) 863–881.

- IBM Best Student Paper Award Competition finalist, INFORMS 2016 (student: SP Singh)

Delasay M, A Jain, S. Kumar. 2022. Impacts of the COVID-19 pandemic on grocery retail operations: An analytical model. *Production and Operations Management* 31(5) 2237–2255.

Sasanuma K, M Delasay, C Pitocco, T Sexton, AA Scheller-Wolf. 2022. A marginal analysis framework to incorporate the externality effect of ordering perishables. *Operations Research Perspectives* 9 1–12.

Agnihothri S, L Cui, M Delasay, B Rajan. 2020. The value of mHealth for managing chronic conditions. *Health Care Management Science* 23(2) 185–202.

Somashekar G, M Delasay, A Gandhi. 2019. Tighter Lyapunov truncation for multi-dimensional continuous-time Markov chains with known moments. *Performance Evaluation Review* 47(2) 33–35.

Delasay M, A Ingolfsson, B Kolfal, K Schultz. 2019. Load effect on service times. *European Journal of Operational Research* 279(3) 673–686.

Delasay, M., A. Ingolfsson, B. Kolfal. 2016. Modeling load and overwork effects in queueing systems with adaptive service rates. *Operations Research* 64(4) 867–885.

- Canadian Operational Research Society (CORS) Best Student Paper Award finalist, 2014.

Delasay M, B Kolfal, A Ingolfsson. 2012. Maximizing throughput in finite source parallel queue systems. *European Journal of Operational Research* 217(3) 554–559.

Refereed Conference Proceedings

Somashekar G, M Delasay, A Gandhi. 2022. Truncating multi-dimensional Markov chains with accuracy guarantee. *Proceedings of IEEE* 30^{th} *International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS)* 121–128.

Votke S, J Abdul Jaleel, A Suresh, M Delasay, S Doroudi, A Gandhi. 2019. Optimal Markovian dynamic control of interference-prone server farms. *Proceedings of IEEE* 27^{th} *International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS)* 295–308.

Rabbani M, M Delasay, A Vazifeh. 2005. Projects evaluation and selection for investment using integrated DEA and AHP approaches. *Proceedings of the* 35^{th} *International Conference on Computers and Industrial Engineering* 1597–1602.

Book Chapters

Delasay M, A Ingolfsson, K Schultz. 2016. Inventory is people: How load affects emergency response times. In *Cross-Functional Inventory Research* 21–50. S Gavirneni (Ed.). World Scientific.

Rabbani M, NM Zadeh, M Delasay, AH Gharegozli. 2007. An integrated approach for fuzzy project evaluation considering monetary and non-monetary criteria. In *Key Factors for Successful Logistics: Services, Transportation Concepts, IT and Management Tools* 97–110. T. Blecker, W. Kersten, C. Herstatt (Eds.). Erich Schmidt Verlag.

Under Revision/ Under Review Manuscripts

Aydemir M, M Delasay, SP Singh, M Akan. Delay information sharing in two-sided queues. 2023. Under review.

Kang K, S Doroudi, M Delasay. Prioritization in the presence of self-ordering opportunities in omni-channel services. 2022. Major revision: *Production and Operations Management.*

- Highlighted in the University of Minnesota 2019 Industrial and Systems Engineering magazine
  Link: `https://cse.umn.edu/college/feature-stories/optimizing-your-morning-coffee`

Abdul Jaleel, J, M Delasay, S Doroudi. 2022. Scalable load balancing in the presence of interference-prone servers. Under review at *Stochastic Models.*

Working Papers/Work-in-Progress

Delasay M, M Akan. Optimal design of load balancing and differentiation tasks in tandem queue services. *Working paper.*

Delasay M, S Tayur. Conditions of Participation: Inducing Organ Discards and Patient Deaths on Transplant Waiting Lists? *Working paper.*

Delasay M, A Rastpour, A Ingolfsson. Evaluating capacity planning methods for loss systems: Application to emergency medical services. *Work-in-progress.*

Delasay M, Z Dehdari. Staffing service systems with cyclic arrivals and state-dependent service rates. *Work-in-progress.*

M Hosseinabadi, A Ingolfsson, M Delasay, K Schultz. Effect of workload on EMT scene time and transport decision. *Work-in-progress.*

Honors and Awards

Stony Brook Trustees Faculty Award, 2022 ($20000)

UUP Individual Development Award, 2022. 2023 ($2000 each year)

POMS College of Humanitarian Operations and Crisis Management (HOCM) Best Paper Award for "A Queueing-Theoretic Framework for Evaluating Transmission Risks in Service Facilities During a Pandemic," POMS 32^{nd} Annual Conference 2022

Most Valuable Professor Award, Stony Brook University, Dec. 2019

Recognized for excellence in teaching, Carnegie Mellon University Tepper School of Business, Spring and fall 2015 and spring 2016

IBM Service Science Best Student Paper Award finalist for "Evaluating the first-mover's advantage in announcing real-time delay information," INFORMS Annual Meeting 2016

Student Paper Competition finalist for "Modeling load and overwork effects in queueing systems with adaptive servers," CORS Annual Conference 2014

Best paper presentations for:

- Load effect on service times. Alberta Research Conference on Operations, Apr. 2013, Edmonton, Canada
- Modeling load and overwork effects in queueing systems with adaptive service rates. Alberta Research Conference on Operations, May 2012, Edmonton, Canada
- Maximizing throughput in finite source parallel queue systems. Business Research Conference, Oct. 2010, Edmonton, Canada

Funded by NSERC CREATE program in Healthcare Operations and Information Management, 2012-2014 ($21,000 per annum)

School of Business General & Ph.D. Awards, University of Alberta, 2009-2012 ($32,000 per annum)

TEACHING

Stony Brook University College of Business

Supply Chain Management & Analytics, MBA — Last taught: Fall 2021
Last rating: 4.83/5

Supply Chain Management, Undergraduate — Last taught: Fall 2021
Last rating: 4.83/5

Operations Management, MBA — Last taught: Summer 2021
Last rating: 4.71/5

Operations Management, Undergraduate — Last taught: Spring 2020
Last rating: 4.9/5

Carnegie Mellon University Tepper School of Business

Operations Management, Undergraduate — Last taught: Spring 2017
Last rating: 4.5/5

Stochastic Processes and Simulation — Last taught: Spring 2017
Last rating: 4.9/5

University of Alberta School of Business, Edmonton, Canada

Decision Support Systems, Undergraduate and MBA — Last taught: Fall 2011
Last rating: 4.1/5

Data Analysis and Decision Making, MBA, Lab instructor — Last taught: Fall 2013

Grant MacEwan University School of Business, Edmonton, Canada

Project Management, Undergraduate — Last taught: Spring 2012
Last rating: 4.7/5

Probability and Statistics I, Undergraduate Last rating: 4.6/5	Last taught: Spring 2013
Probability and Statistics II, Undergraduate Last rating: 4/5	Last taught: Spring 2011
Project Management (online), Undergraduate Last rating: 4.6/5	Last taught: Spring 2014
Probability and Statistics I (online) Undergraduate Last rating: 4.1/5	Last taught: Spring 2011

Academic services

A Special Issue Associate Editor for *Operations Research*

Reviewed for *Management Science*, *Manufacturing & Service Operations Management*, *Production and Operations Management*, *European Journal of Operational Research*, *Queueing Systems*, *Health Care Management Science*, *Stochastic Systems*, *Computers and Industrial Engineering*, *Naval Research Logistics*, *IISE Transactions*, *Plos One*, *Flexible Services and Manufacturing Journal*, *Journal of Quantitative Analysis of Sports*, *Journal of the Operations Research Society of India*, and *International Journal of Logistics*. (Publons link)

Ph.D. advisory committee member:

- Zhila Dehdari Ebrahimi (current Ph.D. student), North Dakota State University College of Business
- Gagan Somashekar (current Ph.D. student), Stony Brook University Department of Computer Science
- Kang Kang (current Ph.D. student), University of Minnesota Industrial and Systems Engineering Department
- Scott Votke (current Ph.D. student), Stony Brook University Applied Math Department
- Mehmet Berat Aydemir (former Ph.D. student), Carnegie Mellon University Tepper School of Business, 2021
- Siddharth Singh (former Ph.D. student), Carnegie Mellon University Tepper School of Business, 2018

Conference session chair:

- COVID-19 Research, INFORMS Healthcare Conference, Virtual, Jul. 2021
- Design and Analysis of Modern Queueing Systems, CORS Annual Conference, Virtual, Jun. 2021
- Joint session MSOM/APS: Design and Analysis of Modern Queueing Systems, INFORMS 2020 Annual Meeting, Virtual, Nov. 2020 (co-chair with Sherwin Doroudi)
- Joint session MSOM/APS: Design and Analysis of Emerging Service Systems, INFORMS 2018 Annual Meeting, Phoenix, Nov. 2018 (co-chair with Sherwin Doroudi)

Faculty advisor for the Tepper School of Business MBA Team, Deloitte MBA Global Supply Chain Case Competition, Feb. 2015

Reviewer for INFORMS Behavioral Operations Management Section Best Working Paper Award, INFORMS Annual Meeting, 2014 and 2105

Judge, Deloitte's 2^{nd} Annual MBA Supply Chain Challenge, Carnegie Mellon University Tepper School of Business, Jan. 2015

Alberta Research Conference on Operations, Organizing Committee, 2013

College of Business Services

Search Committee member for the Strategy and Entrepreneurship Faculty Position, Stony Brook University College of Business, Sep. 2022 - Jan. 2023.

The Chair of the Search Committee for the OM Faculty Position, Stony Brook University College of Business, Dec. 2021 - Mar. 2022

Operations and Analytics Speaker Series Organizer, Stony Brook University College of Business, Since Sep. 2019

Course coordinator for Operations Management (BUS 346), Stony Brook University College of Business, Since spring 2019

Developed the new course "BUS 371/MBA 544-Supply Chain Analytics" and offered it for the first time in Fall 2019

A faculty member of the Center for Entrepreneurial Finance, Stony Brook University College of Business, Since Jan. 2020

Involved in the COVID-19 task force, hosting virtual office hours in operations and supply chain, and working with students for the joint project with Stony Brook Small Business Development Center, 2020

The Chair of the Search Committee for the SUNY Korea OM Faculty Position, Stony Brook University College of Business, Dec. 2019 - Mar. 2020

A member of the Scholarship Committee, Stony Brook University College of Business, Since Nov. 2019

A member of the Strategic Planning Committee, Stony Brook University College of Business, Since 2018

A member of the Assurance of Learning (AOL) Committee, Stony Brook University College of Business, Since May 2021

Invited Seminars at Academic Institutions

Baruch College Zicklin School of Business	Nov. 2023
Rensselaer Polytechnic Institute, Lally School of Management	Mar. 2022
Sharif University of Technology Industrial Engineering Department, Tehran, Iran	Jun. 2018
University of Calgary Haskyane School of Business, Calgary, Canada	Feb. 2018
University of Alberta School of Business, Edmonton, Alberta	Feb. 2018
University of Ontario Institute of Technology Faculty of Business and Information Technology, Oshawa, Canada	Apr. 2017
Ryerson University Department of Mechanical and Industrial Engineering, Toronto, Canada	Apr. 2017
Binghamton University School of Management	Apr. 2017
Stony Brook University College of Business	Mar. 2017
Virginia Commonwealth University School of Allied Health Professions	Mar. 2017
University of Minnesota School of Public Health	Mar. 2017
California State University (Northridge) David Nazarian College of Business and Economics	Feb. 2017

	West Virginia University College of Business and Economics	Feb. 2017
	University of Pittsburgh Department of Industrial Engineering	Feb. 2017
	Carnegie Mellon University School of Computer Science	Nov. 2016
	Carnegie Mellon University Tepper School of Business	Feb. 2015
	Carnegie Mellon University School of Computer Science	Nov. 2014
	Carnegie Mellon University Tepper School of Business	Jun. 2014
	Northwestern University Kellogg School of Management	Jun. 2014

Selected Conference Presentations

Impacts of the COVID-19 Pandemic on Grocery Retail Operations: An Analytical Model

DSI Annual Conference, Virtual	Nov. 2021

Analysis and comparison of two-sided queues with different levels of delay information

INFORMS Annual Meeting, Virtual	Oct. 2021
CORS Annual Conference, Virtual	Jun. 2021

Evaluating capacity planning methods for loss systems: Application to emergency medical services.

INFORMS Annual Meeting, Virtual	Nov. 2020
CanQueue Conference, Toronto, Canada	Aug. 2019
POMS Annual Conference, Washington, D.C. (invited)	May 2019
INFORMS Annual Meeting, Phoenix, AZ (invited)	Nov. 2018

Conditions of Participation effect on organ transplant centers' performance

INFORMS Annual Meeting, Seattle, WA (invited)	Oct. 2019
INFORMS Annual Meeting, Phoenix, AZ (invited)	Nov. 2018
POMS Annual Conference, Houston, TX	May 2018
INFORMS Annual Meeting, Nashville, TN	Nov. 2016

Inventory is people: How load affects service times in emergency response

POMS Annual Conference, Houston, TX (invited)	May 2018
INFORMS, Philadelphia, PA (invited)	Nov. 2015
INFORMS Healthcare, Nashville, TN (invited)	Jul. 2015

Optimal design of tandem queues with diagnostic tasks

INFORMS, Philadelphia, PA (invited)	Nov. 2015

Modeling load and overwork effects in queueing systems with adaptive service rates

CORS Annual Conference, Ottawa, Canada	May 2014
- Best student paper award finalist	
INFORMS Healthcare, Chicago, IL	Jun. 2013
CORS Annual Conference, Vancouver, Canada	May 2013
INFORMS Annual Meeting, Phoenix, AZ	Oct. 2012

Load effect on service times

Alberta Research Conference on Operations, Edmonton, Canada	Apr. 2013
- Best paper presentation	

Maximizing throughput in finite source parallel queue systems

Business Research Conference, Edmonton, Canada	Oct. 2010
- Best paper presentation	
CORS Annual Conference, Edmonton, Canada	May 2010