

Curriculum Vitae

KARTHIK V. NATARAJAN
Assistant Professor, Supply Chain and Operations Department
Carlson School of Management, University of Minnesota

Education

Ph. D., Operations, Technology, and Innovation Management 2013
Kenan-Flagler Business School, UNC Chapel Hill
Advisor: Jayashankar M. Swaminathan

M.Sc. (Hons), Chemistry 2008
Birla Institute of Technology and Science (BITS), Pilani

B.E. (Hons), Mechanical Engineering 2008
Birla Institute of Technology and Science (BITS), Pilani

Academic Appointment

Assistant Professor 2013 – to date
Carlson School of Management, University of Minnesota

Other Positions

Program Committee Member (pro-bono) 2013 – to date
OneVillage Partners, Minneapolis

Graduate Research Assistant 2008 – 2013
Kenan-Flagler Business School, UNC Chapel Hill

Intern Spring 2008
Honeywell Technology Solutions Lab, Bangalore, India

Current Membership in Professional Organizations

Institute for Operations Research and the Management Sciences (INFORMS), Production and Operations Management Society (POMS)

HONORS AND AWARDS

University of Minnesota

- Outstanding Teaching Award, Carlson School of Management, 2021
- Finalist, Business Week Faculty of the Year Award, Carlson School of Management, 2020
- Finalist, Business Week Faculty of the Year Award, Carlson School of Management, 2019
- Outstanding Teaching Award, Carlson School of Management, 2016

External Sources

- Meritorious Service Award, Manufacturing and Service Operations Management Journal, 2016
- UNC Kenan-Flagler Outstanding Graduating Doctoral Student Award, 2013

- UNC Graduate School Dissertation Completion Fellowship, 2012-2013
- UNC Kenan-Flagler Peggy Lee – Sunil Wahal Award for Research Excellence, 2012
- Summer Research Fellow, Indian Institute of Technology Madras, 2006

RESEARCH, SCHOLARSHIP, AND CREATIVE WORK

Refereed Publications

1. Natarajan, K.V. and J.M. Swaminathan. 2014. Inventory management in humanitarian operations: impact of amount, schedule, and uncertainty in funding. *Manufacturing and Service Operations Management*, 16(4), pp. 595-603.
 - This paper was featured in the spring 2012 issue of *UNC Kenan-Flagler's ROI* magazine under the title "Hungry for a new solution". Available at <https://www.kenan-flagler.unc.edu/news/hungry-for-a-new-solution/>
2. Natarajan, K.V. and J.M. Swaminathan. 2017. Multi-treatment inventory allocation in humanitarian health settings under funding constraints. *Production and Operations Management*, 26(6), pp. 1015-1034.
 - This paper was featured in a video as part of the *Discovery at Carlson* series. Available at <https://www.youtube.com/watch?v=n4dtYzYgg6A>
3. Mehrotra, M. and K.V. Natarajan. 2020. Value of combining patient and provider incentives in humanitarian healthcare service programs. *Production and Operations Management*, 29(3), pp. 571-594.
4. Martin, P., D. Gupta, and K.V. Natarajan. 2020. Vaccine procurement contracts for developing countries. *Production and Operations Management*, 29(11), pp. 2601-2620.
5. Karimi, A., A. Mishra, K.V. Natarajan, and K. K. Sinha. 2021. Managing commodity stock-outs in public health supply chains in developing countries: an empirical analysis. *Production and Operations Management*. Early View.
 - An earlier version of this paper was a finalist for the **HOCM Best Paper Award Competition** at the POMS 2018 conference.
 - This paper was featured in the summer 2021 issue of *Discovery at Carlson* under the title "Keeping rural health clinics in developing countries from running out". Available at <https://carlsonschool.umn.edu/discovery/summer-2021>
6. Mukherjee, U. K., G. P. Ball, K. D. Wowak, K. V. Natarajan, and J. W. Miller. 2021. Hiding in the herd: the product recall clustering phenomenon. *Manufacturing and Service Operations Management*. Articles in Advance.
7. Natarajan, K. V. and S. Prasad. 2021. A supply chain perspective on India's COVID-19 crisis: lessons from the second wave and preparing for a potential third wave. *Journal of Global Health*. Viewpoint Article. Accepted for Publication.
 - *Journal of Global Health* is published by the *International Society of Global Health* and has a 5-year impact factor of 5.197 (source: Clarivate).

Book Chapters

8. Natarajan, K.V. and J.M. Swaminathan. 2018. Global health. *Handbook of Healthcare Analytics: Theoretical Minimum for Conducting 21st Century Research on Healthcare Operations*, pp. 137-158.

Papers Under Review/Revision

9. Karimi, A., A. Mishra, K.V. Natarajan, and K. K. Sinha. 2021. Designing public health supply chains for developing countries: an evaluation of the impact of pull vs. push distribution on health commodity stock-outs. Under 2nd round review at *Manufacturing and Service Operations Management*. Previous decision: reject and resubmit.
10. Yu, V., K. Donohue, and K. V. Natarajan. 2021. Sourcing under supply disruption and responsibility violation risks: a behavioral investigation. Under 2nd round review at *Management Science*. Previous decision: reject and resubmit.

Working Papers

11. Natarajan, K.V. and J.M. Swaminathan. 2021. Coordinating demand and supply in funding-constrained developing country health supply chains. To be submitted to *Manufacturing and Service Operations Management*.
12. Huang, X., K. V. Natarajan, and K. Ramachandran. 2021. Designing products for developing markets: the impact of prosocial inclination on product positioning and pricing. To be submitted to *Manufacturing and Service Operations Management*.
13. Bansal, S. and K. V. Natarajan. 2021. Value of managerial judgment driven heuristics: insights from field data for the random yield procurement problem. To be submitted to *Production and Operations Management*.
14. Karimi, A., A. Mishra, K.V. Natarajan, and K. K. Sinha. 2021. On the Frontline: Provider-focused Initiatives to Improve the Last-mile Availability of Health Commodities in Developing Countries. To be submitted to *Manufacturing and Service Operations Management*.

Work in Progress

15. Li, D., S. Bansal, and K. V. Natarajan. 2021. Optimizing harvesting regimes to improve working conditions: models and application to agribusiness.
16. Yu, V., K. Donohue, and K. V. Natarajan. 2021. Capacity Investment in Global Vaccine Supply Chains under Regulatory Risks.

Grants and Funding

- **Co-Principal Investigator:** Foundation for Food and Agriculture Research (FFAR). Jordan et al. Scaling new crops for sustainable water management: building supply chains, 2021-24, **\$2,897,423**, funded.

Presentations, Posters, and Exhibits

Invited Public Talks/Presentations

- Center for Global Health and Social Responsibility, University of Minnesota, “India’s COVID crisis: an equity and justice view”, May. 2021

- Minnesota House of Representatives Transportation Finance and Policy Committee, “Impact of COVID-19 on supply chain and transportation systems”, Jan. 2021
 - News release about the committee hearing is available at the following link: <https://www.house.leg.state.mn.us/members/profile/news/10767/30944>
- Center for Global Health and Social Responsibility, University of Minnesota, “Global health pathways interview series”, Sep. 2020
- Carlson School of Management Board of Overseers Meeting, “COVID-19: impact on the global supply chain”, April. 2020

Invited Research Seminars

- Minnesota Population Center, University of Minnesota, Nov. 2018
- Olin Business School, Washington University at St. Louis, Apr. 2018
- Humphrey School of Public Affairs, University of Minnesota, Feb. 2018
- ISOM Workshop, University of Florida, Feb. 2016
- Carlson School of Management, University of Minnesota, Jan. 2013
- Scheller College of Business, Georgia Institute of Technology, Jan. 2013
- Indian School of Business, Jan. 2013
- LeBow College of Business, Drexel University, Dec. 2012
- Mendoza College of Business, University of Notre Dame, Dec. 2012

Invited Presentations at Conferences

- Mehrotra, M. and K. V. Natarajan. Optimal provider and patient incentives in funding-constrained humanitarian healthcare service settings
 - INFORMS Healthcare, Cambridge, Jul. 2019
 - INFORMS Annual Meeting, Phoenix, Nov. 2018
 - INFORMS Annual Meeting, Nashville, Nov. 2016
- Karimi, A., K.V. Natarajan, and K. K. Sinha. Operational drivers of stock-outs in reproductive health supply chains: an empirical study
 - MSOM Conference, Chapel Hill, Jun. 2017
- Natarajan, K.V. and J. M. Swaminathan. Supply- vs. demand-side funding in humanitarian operations
 - INFORMS Annual Meeting, Philadelphia, Nov. 2015
 - POMS Annual Conference, Washington D. C., May 2015
 - INFORMS Annual Meeting, San Francisco, Nov. 2014
 - INFORMS Annual Meeting, Minneapolis, Oct. 2013
- Natarajan, K.V. and J. M. Swaminathan. Inventory management in humanitarian operations: impact of amount, schedule, and uncertainty in funding
 - INFORMS Annual Meeting, Phoenix, Oct. 2012
 - MSOM Conference, New York, Jun. 2012
 - POMS Annual Conference, Chicago, Apr. 2012
- Natarajan, K.V., D. Kostamis, and A.J. Mersereau. Information sharing in a Cournot duopoly
 - INFORMS Annual Meeting, Charlotte, Nov. 2011
 - MSOM Conference, Ann Arbor, Jun. 2011

Media Contributions

1. “Processing bottleneck spurs meat shortage”, **Post Bulletin**, 5/5/2020
2. “How does PPE get to Minnesota health workers who need it?”, **Minnesota Public Radio**, 4/30/2020
3. “COVID-19's impact on the food supply chain”, **Kare 11**, 4/28/2020

4. “How are the plant closures impacting grocery store supply chains?”, **Fox 9**, 4/28/2020
5. “Minnesota facing same struggles as other states in getting crucial medical supplies as coronavirus numbers grow”, **West Central Tribune**, 4/4/2020
6. “3M complies with mask production order but hits back on Trump Administration claims”, **Star Tribune**, 4/4/2020
7. “Medtronic, other med-tech firms fear parts shortage if Trump invokes wartime production law”, **Star Tribune**, 1/4/2020
8. “Families scramble to find baby formula, diapers and wipes”, **NY Times**, 3/30/2020
9. “Coronavirus panic sends stocks tumbling for worst week since 2008 financial crisis”, **Fox 9**, 2/28/2020
10. “Concerns grow over global supply chains as coronavirus slows manufacturing in China”, **Fox 9**, 9 and 10 pm news hour, 2/25/2020
11. “Stocks decline in Minnesota companies amid coronavirus fears”, **Twin Cities Business Magazine**, 2/25/2020
12. “Minnesota businesses feeling crunch as coronavirus spreads”, **Minnesota Public Radio (MPR) News (91.1)**, 8 am news hour, 2/18/2020
13. “Is the coronavirus affecting industry?”, **WWL Radio New Orleans**, 9 am news hour, 2/17/2020
14. “Coronavirus and its effect on the global economy”, **Almanac: Twin Cities Public Television (TPT) and local PBS affiliate**, 7-8 pm news hour, 2/14/2020
15. “Coronavirus could impact multiple industries”, **Kare 11 News: NBC Affiliate**, 6.30 pm news hour, 2/5/2020
16. “China’s coronavirus impact on U.S. imports & exports”, **American Journal of Transportation (AJOT)**, 2/4/2020
17. “Coronavirus is having an impact on supply chain, Minnesota companies”, **KSTP: 5 Eyewitness News**, 6 pm and 10 pm news hour, 2/3/2020
18. “Coronavirus may delay hard-fought U.S. trade wins in China”, **NY Times**, 2/3/2020

TEACHING AND CURRICULUM DEVELOPMENT

Courses Taught at the Carlson School of Management, University of Minnesota

Executive Level

- CHMB 5803: Operations Management (Executive MBA – China)
 - Spring 2021: Average Instructor Rating – 5.96/6, enrollment=21

Graduate Level

- MBA 6220: Supply Chain and Operations (full time MBA core)
 - Fall 2020 (2 sections): Average Instructor Rating – 5.7/6, enrollment=74
- SCO 6094: Responsible Supply Chain Management (MBA elective and MS-SCM required)
 - Spring 2021: Average Instructor Rating – 5.62/6, enrollment=43
 - Spring 2020: Average Instructor Rating – NA due to pandemic, enrollment=29
 - Spring 2019: Average Instructor Rating – 5.84/6, enrollment=25
 - Spring 2018: Average Instructor Rating – 5.86/6, enrollment=32
 - Spring 2017: Average Instructor Rating – 5.68/6, enrollment=28

Undergraduate Level

- SCO 3001: Supply Chain and Operations (undergraduate core)
 - Fall 2019 (3 sections): Average Instructor Rating – 5.79/6, enrollment=237
 - Fall 2018 (3 sections): Average Instructor Rating – 5.83/6, enrollment=253
 - Fall 2017 (3 sections): Average Instructor Rating – 5.76/6, enrollment=281
 - Fall 2016 (3 sections): Average Instructor Rating – 5.73/6, enrollment=294
 - Spring 2016 (3 sections): Average Instructor Rating – 5.72/6, enrollment=288
 - Spring 2015 (3 sections): Average Instructor Rating – 5.66/6, enrollment=291
 - Spring 2014 (3 sections): Average Instructor Rating – 5.61/6, enrollment=225

Courses Taught at the Kenan-Flagler Business School, University of North Carolina at Chapel Hill

Undergraduate Level

- BUSI 403: Operations Management (undergraduate core)
 - Summer 2012: Average Instructor Rating – 4.67/5, enrollment=21

Teaching Cases

- Swaminathan, J.M. and K.V. Natarajan. 2012. 1-800-Flowers.com. UNC Kenan-Flagler Business School case study and teaching note.

ADVISING AND MENTORING

Graduate Student Activities

Doctoral Thesis Committees

- Vincent Yu (co-chair), University of Minnesota, 2021 (expected): initial placement – Post Doctoral Associate, North Carolina State University
- Amir Karimi (co-chair), University of Minnesota, 2020: initial placement – Assistant Professor, The University of Texas at San Antonio

Other Doctoral Advising Work

- Dwaipayyan Roy (co-advisor for first year summer paper), University of Minnesota, 2015-16

Other Mentoring Activities

- Everett Brun, DFRACS program, University of Minnesota, Jan-May 2021
- Zofsha Merchant – mentor for the Honors Mentor Connection Program (Wayzata High School) during high school senior year

SERVICE AND PUBLIC OUTREACH

Service to the Discipline/Profession/Interdisciplinary Area(s)

Journals

- **Associate Editor** – Naval Research Logistics (2019-present)
- **Editorial Review Board** – Decision Sciences (2020-present)
- **Ad-hoc Journal Reviews (total of 70 papers between 2012-present):** Management Science, Manufacturing and Service Operations Management, Operations Research, Production and Operations Management, Decision Sciences, Journal of Operations Management, Academy of

Management Journal, Nonprofit and Voluntary Sector Quarterly, International Transactions in Operational Research, PLOS ONE

Committee Memberships and Leadership Positions

- Committee member – INFORMS Doing Good with Good OR Student Paper Competition (2019-2022)
- Co-chair – INFORMS Doing Good with Good OR Student Paper Competition (2020)

Juror for Research Paper Competitions

- POM Supply Chain College Student Paper Competition (2016, 2017, and 2018)
- MSOM Student Paper Competition (2017 and 2018)

Juror for Academic Conferences

- MSOM Healthcare Special Interest Group (2021)

Organizing Conference Tracks and Sessions

- Track co-chair – Emerging Markets Track and Showcase, DSI Annual Conference (2021)
- Track co-chair – Public Sector Operations Management Track, POMS Annual Conference (2021)
- Session chair – POMS Annual Conference (2015, 2018, 2019, 2021), organized sessions related to healthcare, humanitarian operations, and socially-impactful operations
- Session chair – INFORMS Annual Meeting (2014, 2015, 2016, 2020), organized sessions related to non-profit management and humanitarian operations

Service to the University/College/Department

College Level

- Committee member – MBA Faculty Advisory Committee (2020-present)
- Advisor – Net Impact Undergraduate Chapter (2015-present)

Department Level

- Coordinator – SCO department seminar series (2015-2018)
- Committee member – MS-SCM taskforce (2014-2015)
- Committee member – SCO department tenure-track faculty recruitment committee (2015, 2017)
- Committee member – SCO department Ph.D. recruitment committee (2015, 2016, 2017, 2020)

Public and External Service

- Program Committee member (pro-bono) – One Village Partners, Minneapolis (2013-present)