

**Ram Gopalan**  
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**Profile:**

- Cross-trained business school faculty member, who has taught courses at both the undergraduate and graduate levels, in two different functional areas: *operations research/management science* and *marketing science/marketing strategy*.
- My background includes considerable **industrial work experience**, including time with large blue-chip companies such as **American Express** and **IBM**.
- Experience with a business school in a fast-developing economy during its early stages of inception (full-time faculty member for the first three years of the MBA program launched at the *Indian Institute of Technology, Chennai, India*). This school is also my undergraduate alma mater.
- **Finalist for the INFORMS Wagner Prize** for excellence in operations research practice, 2012.

**Academic Work Experience (2002 – present):**

July 2014 – present: **Clinical Associate Professor**, School of Business, Rutgers – The State University of New Jersey, Camden, NJ - 08102.

July 2011 – June 2014: **Visiting Associate Professor**, Rutgers, The State University of New Jersey.

2006 – June 2011: **Clinical Assistant Professor** at the Fox School of Business, Temple University.

2005 – 2006: **Lecturer**, Fox School of Business, Temple University.

2004 – 2005: **Associate Professor** (with tenure), Indian Institute of Technology, Madras.

2002 – 2004: **Visiting Assistant Professor**, Indian Institute of Technology, Madras.

**Education:**

- Ph.D., *Operations Research*, Massachusetts Institute of Technology.
- M.S., *Industrial Engineering*, State University of New York, Buffalo.
- B.Tech., *Mechanical Engineering*, Indian Institute of Technology, Madras.

**Research Interests:**

- **Supply Chain Management**
- **Business Analytics**
- **Public Sector Decision Making**

**Peer-reviewed Research Publications:**

1. Selecting Good Redistricting Plans from a Large Pool of Available Plans using the Efficient Frontier, co-authored with F.H.Murphy, S.O.Kimbrough and L.Hachadoorian, *Omega*, April 2024.
2. Tackling Gun Violence: Is Systems Thinking Necessary?, co-authored with Tingnan Lin, *Opsearch*, Vol. 59, issue 3, No 7, 908-929, September 2022.

3. Incorporating Maintenance Infeasibilities in an Aircraft Rotation Planning Model, *Asia-Pacific Journal of Operational Research*, Vol. 38, issue 01, 1-27, 2021.
4. Designing Information Ecosystems to Process Citizen Input and Improve Public Sector Decision Making, fully accepted, *International Journal of Applied Decision Sciences*, Vol. 13, No.4, 387-416, 2020.
5. A Production Capacity Optimization Model for a Global Supply Chain Coordinator, co-authored with S. Banerjee and D. Golhar, *International Journal of Applied Decision Sciences*, Vol. 11, No. 4, 2018, pp. 317 - 333.
6. Computational Complexity of Convoy Movement Planning Problems, *Mathematical Methods of Operations Research*, August 2015, Vol. 82, No. 1, pp. 31 – 60.
7. Estimating Order Delivery Times and Fleet Capacity in Freight Rail Networks, part I: Simulation Modeling, *International Journal of Operational Research*, co-authored with T. Godwin and T.T.Narendran, 2015, Vol. 24, No. 3, pp. 329 - 355.
8. Estimating Order Delivery Times and Fleet Capacity in Freight Rail Networks, part II: Analytic Approximation, *International Journal of Operational Research*, co-authored with T. Godwin and T.T.Narendran, 2015, Vol. 24, Issue 4, pp. 369 - 398.
9. Measuring Supply Chain Risk: Predicting Motor Carriers' Ability to Withstand Disruptive Environmental Change using Conjoint Analysis, *Transportation Research C*, co-authored with Craig Atwater, Richard Lancioni and James Hunt, Vol. 48, November 2014, pp. 360 – 378.
10. The Aircraft Maintenance Base Location Problem, *European Journal of Operational Research*, Vol. 236, Issue 2, 16 July 2014, Pages 634–642.
11. Factors Influencing the Design of a Linear Rail Network for a Dedicated Freight Corridor, *International Journal of Logistics Systems and Management*, Vol. 14, No. 1, 2013, co-authored with T.T.Narendran and T.Godwin.
12. The Philadelphia Districting Contest: Designing Territories for City Council based upon the 2010 Census, co-authored with F. Murphy, S. Kimbrough and N. Quintus, *Interfaces*, Vol. 43, No. 5, September-October 2013. (*Finalist for the Wagner Prize*).
13. How Do Individual Personality Traits (D) Influence Perceived Satisfaction with Service for College Students (C) in a Casual Restaurant Setting (I)? The CID Framework, *Journal of Hospitality Marketing & Management*, Vol. 21, Issue 6, 2012, co-authored with N.Jin and S. Lee.
14. To Change or Not to Change: How Motor Carriers Responded Following 9/11, co-authored with Craig Atwater, Richard Lancioni and James Hunt, *Journal of Business Logistics*, Vol. 31, No. 2, 2010, 129 - 155.
15. Improving Customer Experience in Tourism – A Framework for Stakeholder Collaboration, co-authored with Bindu Narayan, published online, *Socio-Economic Planning Sciences*, Vol. 44, Issue 2, June 2010, 100-112.
16. Dimensions of Service Quality in Tourism – an Indian perspective, co-authored with Bindu Narayan, C. Rajendran and L. Prakash Sai, *Total Quality Management & Business Excellence*, Vol. 20, Issue 1, 2009.

17. Analysis of Algorithms for an Online Version of the Convoy Movement Problem, co-authored with N.S.Narayanaswamy, *Journal of the Operational Research Society*, Vol. 60, pp. 1230–1236, August 2009.
18. Tactical Locomotive Fleet Sizing for Freight Train Operations, co-authored with T. Godwin and T.T. Narendran, *Transportation Research E – Logistics and Transportation Review*, Vol. 44, Issue 3, May 2008, pp. 440-454, May 2008.
19. An Ant Colony Algorithm for Cell Formation in Cellular Manufacturing Systems, co-authored with N. Megala and C. Rajendran, *European Journal of Industrial Engineering*, Vol. 2, No. 3, pp. 298 – 336, 2008.
20. Freight Train Routing and Scheduling in a Passenger Rail Network: Computational Complexity and the Stepwise Dispatching Heuristic, co-authored with T. Godwin and T.T. Narendran, *Asia-Pacific Journal of Operational Research*, Vol. 24, No. 4, pp. 499 -533, August 2007.
21. A Heuristic for Routing and Scheduling Freight Trains in a Passenger Rail Network, co-authored with T. Godwin and T.T.Narendran, *International Journal of Logistics Systems and Management*, Vol. 3, No. 1, January 2007.
22. Locomotive Assignment and Freight Train Scheduling using Genetic Algorithms, co-authored with T. Godwin and T.T.Narendran, *International Transactions in Operational Research*, Vol. 13, No. 4, pp. 299 – 332, 2006.
23. Mathematical Models in Airline Schedule Planning, A Survey, *Annals of Operations Research*, (with Kalyan Talluri), Vol. 76 (0), pp. 155 – 185, 1998.
24. The Aircraft Maintenance Routing Problem, *Operations Research*, (with K.Talluri), Vol. 46 (2), 260-271, 1998.
25. Modeling Equity of Risk in the Transportation of Hazardous Materials, *Operations Research*, (with K.Kolluri, R.Batta and M.H.Karwan), Vol. 38 (6), 961-973, 1990.
26. The Equity Constrained Shortest Path problem, *Computers and Operations Research*, (with R.Batta and M.H.Karwan), Vol. 17 (3), 297-307, 1990.

#### **Peer-reviewed Book Chapters:**

- Gopalan, R. Optimizing Cash Flows for a Retail Supply Chain Coordinator, in *Supply Chain Finance: Risk Management, Resilience and Supplier Management*, edited by Wendy Tate, Lydia Bals and Lisa Ellram, Kogan Page publishing, ISBN: 978 0 7494 8240 4, 2019.
- Turktarhan, G., Gopalan, R., & Ozkul, E. (2021). Big data and business intelligence in hospitality and tourism. In C. Cobanoglu, S. Dogan, K. Berezina, & G. Collins (Editors), *Hospitality & Tourism Information Technology*, pp. 1 - 32.  
Available at USF M3 Publishing, <https://www.doi.org/10.5038/9781732127593>.

#### **Work in Progress:**

- Comparing human and computer map evaluation (co-authored).
- Exploring the distributions of randomly generated political districting maps (co-authored).
- Exploring gun violence using the National Incident Based Reporting System (NIBRS) data.

#### **Awards & Honors:**

- **Rutgers' President's award for teaching, 2018.**
- Listed as **Key Speaker**, 11<sup>th</sup> ISDSI conference, December 2017, IIM Tiruchirapalli.

- Rutgers *Digital Teaching Fellow*, 2017.
- Awarded a freelance writing contract with the Indian **Wall Street Journal** for the period 2012-2013.
- Finalist and “**Compactness Category**” winner (along with Fred Murphy, Steve Kimbrough and Nick Quintus) in the open **Philadelphia Re-districting Competition** held in August 2011. This competition was organized by WHYY, The Penn Center for Civic Engagement, Philly.com and Azavea, Inc. Over 1200 plans were developed by contestants and 4 category winners and 3 honorable mentions were chosen by the judges. This project is also a **finalist for the INFORMS Wagner prize** in 2012.
- Invited doctoral proposal and doctoral thesis reviewer, Eindhoven University of Technology, IIM Kozhikode.
- *Chairman’s Award for Quality, American Express, 1998.*
- **Best research paper award** at the VII Annual International Conference of the Society of Operations Management, Indian Institute of Management, Indore, December 19-21, 2003, co-authors T.T.Narendran and T. Godwin.
- **Best research paper award** at the VIII Annual International Conference of the Society of Operations Management, National Institute of Industrial Engineering, Mumbai, December 17-20, 2004, co-authors T.T.Narendran and T. Godwin.
- A graduate student supervised at IIT, Madras, Aweek Majumdar, won the **Best Research Paper** award at an international conference on services management, New Delhi, 2005. His thesis was one of the earliest academic works to explore the emergence of organized retailing in India.
- Reviewer for Harvard Business School cases.

#### Media Coverage:

- A study of customer satisfaction with public services in the city of Chennai was mentioned on July 14, 2006 in the *Indian Express*. (Co-investigator Prof. Sanghamitra Bhattacharya, I.I.T., Madras). The same study was covered in *The Hindu*, at the following URL: <http://www.hindu.com/2006/07/15/stories/2006071520700400.htm>
- Interviewed by reporter John Ostapovich on the radio (KYW 1060) on December 14, 2009. I commented on the impact of the looming British Airways strike.
- Philadelphia re-districting contest winners announced at: <http://www.newsworks.org/index.php/homepage-feature/item/25988-06csmaps> (downloaded September 14, 2011).
- Career Journal column with the Indian **Wall Street Journal** at [http://blogs.wsj.com/indiarealtime/2012/11/02/career-journal-in-defense-of-the-company-man/?reflink=djm\\_naukri\\_career\\_journal](http://blogs.wsj.com/indiarealtime/2012/11/02/career-journal-in-defense-of-the-company-man/?reflink=djm_naukri_career_journal)
- Mycentraljersey.com (2014), “The State readies for Big Data with passage of bill,” by Cheryl Makin, downloaded on August 15<sup>th</sup> from: <http://www.mycentraljersey.com/story/news/local/middlesex-county/2014/09/24/state-readies-big-data-passage-bill/16152009/>
- What Ho! What can captains of industry learn from cricket?, published May 8, 2018: <https://www.fortuneindia.com/opinion/what-ho-what-can-captains-of-industry-learn-from-cricket-3/101836>  
An article in *Fortune India* connecting two of my passions: business and cricket!

### **Grants:**

- Funded proposal from the *NJ Center on Gun Violence*, Summer 2019: Proposal to enhance policing effectiveness by applying *machine learning algorithms* to secondary data sets. Preliminary results were presented at the Rutgers NJ Gun Violence Conference in 2019.
- RSBC competitive summer research grant (2022), to study peak loads in 311 service systems, with the objective of building an extreme value distribution for peak 311 loads.

### **Popular Magazine Articles:**

- Panning for Gold - An Approach to Enhancing Sales Force Effectiveness, *Intelligent Enterprise*, December 1999.
- Customer Portfolio Management Using Z-Ranking of Customer Segments and the LTV Perturbation Method, *Journal of Database Marketing & Customer Strategy Management*, April 2007. Currently available on SSRN at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4330395](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4330395).
- Do Revenue Management Games Always Increase Revenue?, *INFORMS* magazine, December 2011. Available at <http://www.informs.org/ORMS-Today/Public-Articles/December-Volume-38-Number-6/FORUM>.

### **Selected Conference Presentations/Proceedings:**

- Through Flight Optimization, *INFORMS*, (with S.Ramachandran, Kenji Oba and J.Seng), 1996.
- Advances in Integrated Optimization Systems for Airline Schedule Planning, *INFORMS*, (with R.Rushmeier, S.Kontogiorgis, R.Lochan, S.Ramachandran and R.Vaccari), 1996.
- Freight Trains Pathing Logistics Along a Fixed Path Route on a Passenger Railroad, Presented in *The Second International Conference on Logistics and Supply Chain Management*, PSG College of Technology, Coimbatore, August 3-5, 2004, co-authored with T. Godwin and T.T.Narendran.
- Multi-Objective Locomotive Assignment for Freight Trains with Scheduling in a Passenger Rail Network, Presented in the *VIII Annual International Conference of the Society of Operations Management*, National Institute of Industrial Engineering, Mumbai, December 17-20, 2004, co-authored with T. Godwin and T.T.Narendran.
- A Petri Net based Simulation Model for Strategic Planning of Freight Train Operations, published in the proceedings of the *The First International Conference in Transportation Logistics*, National University of Singapore, Singapore, July 27-29, 2005, co-authored with T. Godwin and T.T.Narendran.
- Tactical Planning of Freight Train Operation, Presented in the *IX Annual International Conference of the Society of Operations Management*, Pondichery Central University, Pondichery, December 16-18, 2005, co-authored with T. Godwin and T.T.Narendran.
- The Aircraft Maintenance Base Location Problem, *INFORMS San Diego*, 2009.
- Estimating Order Flow Times in Freight Rail Networks, with T. Godwin and T.T. Narendran, *INFORMS Austin*, 2010.
- The Philadelphia Districting Contest, with F. Murphy, S. Kimbrough and N. Quintus, *INFORMS*, Fall 2012 (Phoenix).
- An Integrated Framework for Risk Assessment in Maritime Transportation, *INFORMS Transportation Science Society Meeting with special focus on Marine Transportation and Port Logistics*, Asilomar Conference, June 16-19, 2013.

- Thirty Years of Airline Maintenance Optimization, presented at the 11<sup>th</sup> ISDSI conference (refereed conference), Indian Institute of Management, Tiruchirapalli, December 2017. (listed as *key speaker* at this conference).
- An Exploratory Investigation of Gun Violence using the NIBRS and LEOKA data sets, co-authored with Tingnan Lin and Hoang Pham, presented at the conference hosted by the *Rutgers Center on Gun Violence*, Nov. 7, 2019.
- Lee Hachadoorian, Temple University; Ram Gopalan, Rutgers University, Camden; Steven O. Kimbrough, University of Pennsylvania; Frederic H. Murphy, Temple University; Peter Miller, Brennan Center for Justice; *Selecting Reasonably Good Redistricting Plans in a Criteria-Agnostic Manner Using the Efficient Frontier*, American Association of Geographers conference, 2022.

### **Service Activities:**

- Ad hoc referee for journals such as *European Journal of Operations Research*, *Computers and Industrial Engineering*, *IIE Transactions*, *Socio-Economic Planning Sciences*, *Journal of International Management*, *IEEE Transactions on Engineering Management*, *Interfaces*, *Journal of the Operational Research Society*, *Transportation Research*, *Opsearch*, *International Journal of Production Economics*.
- Co-chair for two airline-scheduling sessions of **AGIFORS** (society for airline operations research professionals).
- Dissertation committee member for Craig Atwater, doctoral student, Temple University (2010).
- Dissertation committee member for Ellen Thomas, Temple University (2010).
- Thesis committee member for Naehyun Jin (2009) (at the School of Hospitality and Tourism Management).
- New Jersey Big Data Alliance Committee, 2012-13.
- AACSB graduate committee, 2012-2013, 2015-2016. Assisted in compiling data and formulating rubrics for the AACSB review process at Rutgers in 2013, 2018.
- Teaching committee, 2013-14.
- Undergraduate Curriculum Innovation committee, 2014-15, 2015-16, 2016-17, 2017-18.
- Global scientific committee, Global conference on services management, Oct. 3-7, Volterra, Italy, 2017.
- International advisory board, 11<sup>th</sup> ISDSI conference, Indian Institute of Management, Tiruchirapalli, December 2017.
- Invited technical session chair for two sessions, 11<sup>th</sup> ISDSI conference, Indian Institute of Management, Tiruchirapalli, December 2017.
- Invited speaker, Philadelphia INFORMS chapter, May 2018. (talk focused on re-districting).
- OM search committee, Fall 2021.
- Strategic planning committee for RSBC, 2021-22.
- Faculty credentialing committee, 2021-22.
- AACSB assurance of learning (AOL) ongoing support as required.

### **Courses Taught:**

*Management Science/Operations Management:* Supply Chain Management, Statistics, Advanced Stochastic Models, Advanced Deterministic Models, Data Mining and Warehousing, Operations Management,

Managing New Product Development, Optimization and Spreadsheet Modeling, Business Analytics, Machine Learning Applications for Business, Data Analytics for Business.

*Marketing:* Marketing Strategy, International Marketing, Advertising, Marketing Research, Customer Relationship Management, Sales Force Management.

**Consulting Experience:**

- Signed a formal agreement to exchange data for research with one of the largest and most profitable US Air Carriers (2010).
- Completely designed and delivered a training workshop for a firm in the chemical industry (with \$8 billion in revenues).
- CRM workshop for one of the largest insurance providers in India.
- Served as the technical lead for IBM's CapitalMax product, serving broker-dealers in the financial services industry.
- Executed a CRM benchmarking exercise for one of the largest Canadian banks.
- Evaluated the warranty policy for a large Japanese auto-maker.

**Industrial Work Experience (period 1992 – 2002):**

- *Consultant/Senior Consultant (& Project Manager)* with U.S. Airways (1992 – 1996):

I participated in the development of USAir's Fleet Assignment model and also served as the project manager for the development of the Through Flight Optimization model and the Maintenance Routing model. All models were *implemented* in planning and scheduling of the airline's operations.

- *Senior Risk Manager* with American Express corporation (1996 – 1999):

I was responsible for setting credit standards to admit clients to the *corporate card* portfolio. I also participated in the launch of a new product, the United Airlines Corporate Card.

- Start-up experience with Sophisticated Analytics International (1999 – 2000).
- *Senior Consultant* with IBM Global Services (2000 – 2002)