

**SRIDHAR R. TAYUR**

Ford Distinguished Research Chair; University Professor of Operations Management  
Tepper School of Business, Carnegie Mellon University, Pittsburgh, PA 15213  
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**Education**

<b>Degree</b>	<b>Discipline</b>	<b>University</b>	<b>Date</b>
Ph.D.	ORIE (Advisor: Professor Robin Roundy)	Cornell University	1990
M.S.	ORIE (Operations Research and Industrial Engineering)	Cornell University	1989
B. Tech.	Mechanical Engg.	IIT Madras	1986

**Former and Current Positions**

- 1. University Professor (Ford Distinguished Research Chair, 2003-)** **July 1998 –Present**  
*Tepper School of Business, Carnegie Mellon University, Pittsburgh, PA*  
  
Founder, SmartOps Corporation (CEO 2000-2012)  
Acquired by SAP AG (2013)  
  
Founder and CEO, OrganJet Corporation, 2011-  
  
Professor of Cardiology (by courtesy) at West Penn/ Allegheny Health System, 2009-2011.  
Courtesy (visiting) appointment, MIT, 2012-2015.  
Visiting Professor, Stanford GSB, Spring 2017.
- 2. Associate Professor** **July 1994 – June 1998**  
*Tepper School of Business, Carnegie Mellon University, Pittsburgh, PA*  
Tenured July 1996; Sabbatical at MIT, Fall 1997.
- 3. Assistant Professor** **September 1991 – June 1994**  
*Tepper School of Business, Carnegie Mellon University, Pittsburgh, PA*
- 4. Logistics Engineer** **June 1991 – August 1991**  
*IBM Worldwide Logistics Head Quarters, Somers, NY*
- 5. Visiting Scientist** **September 1990 – June 1991**  
*Cornell University, Department of Operations Research and Industrial Engineering, Ithaca, NY*
- 6. Member of Technical Staff** **May 1990 – August 1990**  
*IBM, T.J. Watson Laboratories, Yorktown Heights, NY*
- 7. Member of Technical Staff** **May 1988 – August 1988**  
*AT&T – Bell Laboratories, Holmdel, NJ*

## **Awards and Honors**

1. INFORMS Public Sector (PSOR) Best Paper Award, 2022.
2. MSOM Best Paper Award, 2022.
3. Finalist, INFORMS Service Science Best Paper Award, 2022.
4. INFORMS Pierskalla Award, 2021.
5. NSF Distinguished Lecture, 2021.
6. TEDxCMU, Unconventional Computing, 2020.
7. Finalist, M&SOM Responsible Research Award, 2019.
8. University Professor, 2019.
9. Distinguished Alumnus Award, IIT Madras, 2018.
10. Plenary Speaker, DSI Conference, 2017.
11. Elected to the National Academy of Engineering, 2017.
12. Distinguished Fellow, M&SOM Society, 2017.
13. White House Summit on Organ Donation, 2016.
14. INFORMS Pierskalla Award, 2015.
15. Plenary Speaker, POMS Conference, Washington, DC, 2015.
16. Bangs Lecture, Cornell University, 2014.
17. Supply Chain Thought Leader Keynote, MSOM Conference, 2014.
18. HBS Case on OrganJet + GuardianWings, 2013.
19. INFORMS Fellow, 2012.
20. Second Prize, INFORMS Teaching Case Competition, 2012.
21. Marschak Colloquium, UCLA, 2012.
22. First Prize, POMS Healthcare Best Paper Competition, 2012.
23. Darden Case on SmartOps Corporation, 2011.
24. Commencement Speaker, Heinz School, Carnegie Mellon University, 2009.
25. Plenary Speaker, MSOM Conference, Baltimore, 2008.
26. Plenary Speaker, INFORMS Conference, Seattle, 2007.
27. Commencement Speaker, South Hills High School, Pittsburgh, 2007.
28. First Place, Carnegie Science Center Award for Innovation in Information Technology, 2007.
29. Finalist, Franz-Edelman Award for Outstanding Application of ORMS in Practice, 2004.
30. Finalist, Ernst & Young Entrepreneur of the Year Award, 2002.
31. President, M&SOM Society, 2001-2002.
32. First Place, INFORMS Case Study Competition, 2000.
33. First Place, Enterprise Business Plan Competition, 2000.
34. George Leland Bach Excellence in Teaching Award (for MBA teaching), 1999.
35. Finalist, Lanchester Prize, 1997.
36. Industrial Management Undergraduate Teaching Award, 1993.
37. Honorable Mention, Nicholson Prize, 1990.

## **Industrial Projects, Consulting Assignments, Board Positions and Non-Profit Work**

1. *GE-EMD*, Ohio, on setting up a Kanban system and Cyclic Schedules (1992-3).
2. *Allegheny Ludlum*, Pittsburgh, on Scheduling and Due-date management (1993).
3. *North Side Foods*, on (a) inventory control and (b) ABC costing (1992-3).
4. *Wesco*, on managing their Distribution system (1993).
5. *Procter and Gamble*, Mexico, on allocation of inventory to customers (1993).
6. *TRW-Nelson*, Ohio, on Cellular Manufacturing (1994).

7. *Sintermet*, Pittsburgh, on Lead Time Quotation (1994).
8. *ASCO*, Pittsburgh, on Product Costing (1994).
9. *Vocational Rehabilitation Center*, Pittsburgh, on Information Systems and Productivity issues (1994).
10. *City of Pittsburgh* (Housing Department Architects) on consolidating their maintenance operations (1994).
11. *CiScorp*, Pittsburgh, on Time Shared Jet-Aircraft Scheduling (1995) for a subsidiary of American Airlines.
12. *Latrobe Steel Company*, on Plant Management (1995).
13. *US Filter*, using task-design changes for improving customer service while managing a wide product line (1995).
14. *American Standard*, on managing variety in their consumer air-conditioning line as well as luxury bath tub line (1995).
15. *Intel*, on allocating technology and products to plants (1995); Setting Inventory Levels in their Supply Chains (1998).
16. *The Geon Corporation*, on the ‘focused factory’ concept (1996).
17. *WABCO* (and Union Pacific Railroad), on managing ‘End-of-Train’ devices (1996).
18. *Ketchum PR*, on customer surveys (1996).
19. *Caterpillar*, on designing a responsive supply chain for a line of new products (1997-8) and Product Simplification (2006-8).
20. *Bush Industries*, on mass-customization and use of factory planning software/ERP systems (1998-2000).
21. *Medrad*, on inventory management (2000).
22. *McKinsey & Co.*, on Supply Chain Strategy (1998-2000).
23. *Giant Eagle and Shaw’s Supermarkets*, on inbound logistics optimization (2000).
24. *Eaton Corporation*, on inventory management (2001).
25. *CCG Inc.*, Advisory Board (2001-2008).
26. *Flight Options*, on Scheduling of Fractional Jet Aircraft (2001-2002).
27. *John Deere*, on Building Efficient Product Portfolios (2003-2004) and Seasonal Logistics Tactics (2005-7).
28. *CNH*, on Order Fulfillment (2004).
29. *Massive Incorporated*, on Dynamic Scheduling of In-game advertisements (2007-9).
30. *ConAgra Foods*, on Production Planning (2007-9).
31. *LMI*, on analytics and software go-to-market strategy (2012).

32. *Orchestra*, Board of Directors (2015-16).
33. *True Spark*, Advisory Board (2015-16).
34. *Charter Steel*, Scheduling and Capacity Optimization (2015-18).
35. *VocalID*, Advisory Board (2016-22).
36. *Transplant Interface*, Board of Directors (2016-).
37. *WGBH*, Board of Overseers (2016-18).
38. *MITRA Biotech*, Advisory Board (2016-2018).
39. *Neotribe Ventures*, Advisory Board (2017-).
40. *Heritage Valley Health System*, Board of Directors (2019-).
41. *Pittsburgh Quantum Institute*, Executive Committee (2020-).
42. *Vendia*, Advisory Board (2020-).
43. *e-Solutions Furniture*, Modernizing e-commerce supply chain (2021).
44. *Quantbot Technologies*, Quantum Algorithms for Portfolio Optimization (2021-)

### **PhD Student Supervision**

1. ROMAN KAPUSCINSKI, graduation: 1996. Committee Chair.  
University of Michigan, Ann Arbor. (Tenured, full and Chair professor.)  
Recipient of Cooper Award for Best Dissertation at GSIA, 1996.  
Second Place in MSOM Student Paper Competition, INFORMS, 1997.
2. JAY SWAMINATHAN (GSIA/Robotics), graduation: 1996. Committee Chair.  
University of California, Berkeley. UNC, Chapel Hill. (Tenured, full and Chair professor.)  
First Place in George E. Nicholson Student Paper Competition, INFORMS, 1996.  
Finalist at Dantzig Dissertation Award, INFORMS, 1997. NSF CAREER Award, 2001.
3. SRINAGESH GAVIRNENI, graduation: 1997. Committee Chair.  
Cornell University. (Tenured and full professor.) Honorable Mention at MSOM Student Paper Competition, INFORMS, 1996. Recipient of Cooper Award for Best Dissertation at GSIA, 1997.
4. PINAR KESKINOCAK, graduation: 1997. Committee Chair.  
ISyE Dept., Georgia Tech. (Tenured, full and Chair professor.)  
Honorable Mention in Nicholson Student Paper Competition, INFORMS, 1998.  
NSF CAREER Award, 2001.
5. CARLOS BISPO, graduation: 1997. Committee Chair.  
Instituto Superior Technico, Lisbon.  
Honorable Mention at MSOM Student Paper Competition, INFORMS, 1998.
6. FERYAL ERHUN, graduation: 2002. Committee Chair.  
Stanford University.  
NSF CAREER Award, 2004.
7. WEI YANG, graduation: 2004. Committee Chair.

Case Western Reserve University.

8. NIHAT ALTINTAS, graduation: 2006. Committee Chair.  
Lehman Brothers. Millenium Hedge Fund. Credit Suisse.
9. JOHN TURNER, graduation: 2010. Committee Chair.  
UC Irvine.  
*First Prize, Dantzig Dissertation Award, 2011.*
10. TINGLONG DAI, graduation: 2013. Committee Chair.  
Johns Hopkins University.  
*First Prize, POMS Best Paper Award in Healthcare, 2012.*  
*Second Prize, INFORMS Case Competition, 2012.*  
*Finalist, Elwood S. Buffa Doctoral Dissertation Award, 2014.*  
*Honorable Mention, Wickham Skinner Early Career Award, 2020.*
11. VINCE SLAUGH, graduation: 2015. Committee Chair.  
Pennsylvania State University. Cornell University.  
*Finalist, Doing Good with Good OR, INFORMS, 2013.*  
*Second Prize, IBM Service Science Student Competition, 2015.*
12. KYRA GAN, graduation: 2022. Committee Chair.  
Harvard University. Cornell University.  
*First Prize, INFORMS Pierskalla Award, 2021.*

## **Publications**

### **Healthcare Operations**

S. BERNARDS, E. LEE, N. LEUNG, M. AKAN, K. GAN, H. ZHAO, M. SARKAR, S. TAYUR AND N. MEHTA. 2022. Awarding additional MELD points to the shortest waitlist candidates improves sex disparity in access to liver transplant in the United States. *AJT*.  
<https://doi.org/10.1111/ajt.17159>.

J. KUSH AND S. TAYUR. 2022. **Video intervention to increase decedent tissue donation by next-of-kin.** *POM*. <https://doi.org/10.1111/poms.13679>.

T. KIM, J. ROBERTS, A. STRUDLER AND S. TAYUR. 2021. **Ethics of Split Liver Transplantation: should a large liver always be split if medically safe?** *J. Med. Ethics*.  
<https://doi.org/10.1136/medethics-2021-107400>.

A. PATEL, K. GAN, A. A. LI, J. WEISS, S. M. NOURAIIE, S. TAYUR, AND E. M. NOVELLI. 2020. **Machine Learning Algorithms for Predicting Hospital Readmissions in Sickle Cell Disease.** *British Journal of Hematology*. <https://doi.org/10.1111/bjh.17107>.

T. DAI, M. AKAN AND S. TAYUR. 2016. **Imaging Room and Beyond: The Underlying Economics Behind Physicians' Test-Ordering Behavior in Outpatient Services.** *MSOM*.  
<https://doi.org/10.1287/msom.2016.0594>.

*Winner of POMS Best Paper Award in Healthcare, 2012.*

B. ATA, A. SKARO AND S. TAYUR. 2016. **OrganJet: Reducing Geographic Disparity in Kidney Transplant Waiting Times in the US.** *Management Science*.  
<https://doi.org/10.1287/mnsc.2016.2487>.

*Winner of INFORMS Pierskalla Award, 2015.*

M. AKAN, S. TAYUR, S. MURALI AND A. RADHAKRISHNAN. 2012. **Economic Analysis of Pharmacogenic Information for the Anti-Coagulation Treatment of the Elderly.** *Journal of the American College of Cardiology*, **58**.

B. OMALU, A. SHAKIR, J. LINDNER AND S. TAYUR. 2007. **Forecasting as an Operations Management Tool in a Medical Examiner's Office.** *Journal of Health Management*, **9**(1), 75-84.

### **Supply Chain Management and Inventory Models**

J. KARP, S. JIA, R. RAVI AND S. TAYUR. 2021. **Effective Online Order Acceptance Policies for Omni-Channel Fulfillment.** *M&SOM*.  
<https://doi.org/10.1287/msom.2021.1024>.

S.-H. CHO, X. FANG, S. TAYUR AND Y. XU. 2019. **Combating Child Labor: Incentives and Information Disclosure in Global Supply Chains.** *M&SOM*.  
<https://doi.org/10.1287/msom.2018.0733>.

*MSOM Best Paper Award, 2022.*

B. BILLER, C. GUNES AND S. TAYUR. 2018. **Driving Inventory System Simulations with Limited Demand Data: Insights from Newsvendor Model.** *Journal of Simulation*.  
<https://doi.org/10.1080/17477778.2018.1488935>.

B. BILLER, C. GUNES AND S. TAYUR. 2017. **Demand Fulfillment Probability in a Multi-item Inventory System with Limited Historical Data.** *IIE Transactions*.  
<https://doi.org/10.1080/24725854.2017.1355125>.

V. SLAUGH, B. BILLER AND S. TAYUR. 2016. **Managing Rentals with Usage-Based Loss.** *M&SOM Journal* **18**(3), pp. 429-444.

S.-H. CHO, X. FANG AND S. TAYUR. 2015. **Combating Strategic Counterfeiters in Licit and Illicit Supply Chains.** *M&SOM Journal*, **17**(3), pp. 273-289.

A. AKCAY, B. BILLER AND S. TAYUR. 2011. **Improved Inventory Targets in the Presence of Limited Historical Demand Data.** *Manufacturing & Service Operations Management*, **13**(3), pp. 297-309.

A. SCHELLER-WOLF AND S. TAYUR. 2009. **Risk Sharing in Supply Chains Using Order Bands –Analytical Results and Managerial Insights.** *International Journal of Production Economics*, **121**(2), pp. 715-7272.

N. ALTINTAS, F. ERHUN AND S. TAYUR. 2008. **Quantity Discounts under Demand Uncertainty.** *Management Science*, **54**(4), pp. 777-792.

F. ERHUN, P. KESKINOCAK AND S. TAYUR. 2008. **Dynamic Procurement in a Capacitated Supply Chain Facing Uncertain Demand.** *IIE Transactions*, **40**(8), pp. 733-748.

- F. ERHUN, P. KESKINOC AK AND S. TAYUR. 2008. **Dynamic Procurement, Quantity Discounts and Supply Chain Efficiency.** *POMS*, **17**(4), pp. 1-8.
- S. GAVIRNENI AND S. TAYUR. 2001. **An Efficient Procedure for Non-stationary Inventory Control.** *IIE Transactions*, **33**(2), pp. 83.
- C. BISPO AND S. TAYUR. 2001. **Re-Entrant Flow Lines: Theoretical Framework and Experimental Results.** *IIE Transactions*, **33**(8).
- S. GAVIRNENI, R. KAPUSCINSKI AND S. TAYUR. 1999. **Value of Information in Capacitated Supply Chains.** *Management Science*, **45**(1), pp. 16-24.
- R. KAPUSCINSKI AND S. TAYUR. 1999. **Variance vs. Standard Deviation: Note on Variance Reduction through Operations Reversal in Supply Chain Reengineering.** *Management Science*, **45**(5), pp. 765-767.
- J. SWAMINATHAN AND S. TAYUR. 1998. **Managing Broader Product Variety Through Delayed Differentiation using Vanilla Boxes.** *Management Science*, **44**, S161-72.
- R. KAPUSCINSKI AND S. TAYUR. 1998. **A Capacitated Production-Inventory Model with Periodic Demand.** *Operations Research*, **46**(6).
- P. GLASSERMAN AND S. TAYUR. 1996. **A Simple Approximation for Multi-Stage Capacitated Production-Inventory System.** *Naval Research Logistics*, **43**(1), pp. 41-58.
- P. GLASSERMAN AND S. TAYUR. 1995. **Sensitivity Analysis for Base Stock Levels in Multi-Echelon Production-Inventory System.** *Management Science*, **41**(2), pp. 263-281.
- P. GLASSERMAN AND S. TAYUR. 1994. **The Stability of a Capacitated, Multi-Echelon Production- Inventory System under a Base-Stock Policy.** *Operations Research*, **42**(5), pp. 913-925.
- S. TAYUR. 1993. **Computing the Optimal Policy for Capacitated Inventory Models.** *Stochastic Models*, **9**(1).

### **Operations Management in Manufacturing, Logistics and Services**

- I. KARAESMEN, P. KESKINOC AK, S. TAYUR AND W. YANG. 2008. **Aircraft and Crew Constraints Scheduling in Fractional Ownership Programs.** *Annals of Operations Research*, **159**(1), pp. 415-431.
- B. I. OMALU, A. M. SHAKIR, J. L. LINDER, AND S. R. TAYUR. 2007. **Forecasting as an Operations Management Tool in a Medical Examiner's Office.** *Journal of Health Management*, **9**(1), pp. 75-84.
- R. KAPUSCINSKI AND S. TAYUR. 2007. **Reliable Lead Time Quotation in a MTO Environment.** *Operations Research*, **55**(1), pp. 56-74.
- M. DAWANDE, S. GAVIRNENI AND S. TAYUR. 2006. **Effective Heuristics for Multi-Product Partial Shipment Models.** *Operations Research*, **54**(2), pp. 337-352.
- L. LI AND S. TAYUR. 2005. **Medium-term Pricing and Operational Planning in Intermodal Transportation.** *Transportation Science*, **39**(1), pp. 73-86.

P. KESKINOC AK, R. RAVI AND S. TAYUR. 2001. **Scheduling and Reliable Lead Time Quotation with Availability Intervals and Lead Time Sensitive Revenues.** *Management Science*, **47**(2), pp. 264-279.

S. GAVIRNENI AND S. TAYUR. 1999. **Managing a Single Customer using a Target Reverting Ordering Policy.** *M&SOM Journal*, **1**, pp. 157-173.

J. SWAMINATHAN AND S. TAYUR. 1999. **Managing Design of Assembly Sequences for Product Lines that Delay Product Differentiation.** *IIE Transactions*, **31**, pp. 1015-1026.

R. ANUPINDI AND S. TAYUR. 1998. **Managing Stochastic Multi Product Systems: Model, Measures and Analysis.** *Operations Research*, S98-111.

P. KESKINOC AK AND S. TAYUR. 1997. **Scheduling of Time-Shared Jet Aircraft.** *Transportation Science*, **3**, pp. 277-294.

J. MUCKSTADT AND S. TAYUR. 1995. **A Comparison of Alternate Kanban Control Mechanisms: Part 1. Background and Structural Properties.** *IIE Transactions*, **27**, pp. 140-150.

J. MUCKSTADT AND S. TAYUR. 1995. **A Comparison of Alternate Kanban Control Mechanisms: Part 2. Experimental Results.** *IIE Transactions*, **27**, pp. 151-161.

S. TAYUR. November 1993. **Structural Properties and a Heuristic for a Kanban Controlled Serial Manufacturing System.** *Management Science*, **39**(11), pp. 1347-68.

D. J. MORRICE, R. S. GAJULAPALLI AND S. TAYUR. 1993. **A Single Server Queue with Cyclically Indexed Arrival and Service Rates.** *Queueing Systems*, **15**(2).

S. TAYUR. 1992. **Properties of Serial Kanban Systems.** *Queueing Systems*, **12**, pp. 297-318.

R. ROUNDY, W. MAXWELL, Y. HERER, S. TAYUR AND A. GETZLER. 1991. **A Price-Directed Approach to Real-Time Scheduling of Production Operations.** *IIE Transactions*, **23**, pp. 149-160.

#### **Novel Techniques/Methodologies/Devices**

A. PRABHAKAR, P. SHAW, U. GAUTHAM, V. NATARAJAN, V. RAMESH, N. CHANDACHOODAN AND S. TAYUR. 2022. **Optimization using wave based annealers.** *Philosophical Transactions of the Royal Society A* (forthcoming).

M. DAWANDE, P. KESKINOC AK, J. SWAMINATHAN AND S. TAYUR. 2001. **On the Bi-clique and Multi- Partite Clique Problems,** *J. Algorithms*, **41**(2), pp. 388-403.

D. BERTSIMAS, G. PERAKIS AND S. TAYUR. 2000. **A New Algebraic Geometry Algorithm for Integer Programming,** *Management Science*, **46**(7), pp. 999-1008.

S. TAYUR, R. THOMAS AND N. R. NATRAJ. 1995. **An Algebraic Geometry Algorithm for Scheduling in Presence of Setups and Correlated Demands,** *Mathematical Programming*, **69**(3), pp. 369-402

*Finalist at the 1997 Lanchester Prize for best paper (published in the last 3 years) in the field of Operations Research.*



R. KANNAN, J. MOUNT AND S. TAYUR. 1995. **A Randomized Algorithm for Optimizing over Certain Convex Sets**, *Mathematics of Operations Research*, **20**(3), pp. 529-549.

### **Applications/Implementations**

M. SHUNKO, T. YUNES, G. FENU, A. SCHELLER-WOLF, V. TARDIF AND S. TAYUR. 2017. **Product Portfolio Restructuring: Methodology and Application at Caterpillar**. *POMS*.  
<https://doi.org/10.1111/poms.12786>.

M. MEHROTRA, M. DAWANDE, S. GAVIRNENI, M. DEMIRCI AND S. TAYUR. 2013. **Production Planning with Patterns: A Problem from Processed Food Manufacturing**. *Operations Research*, **59**(2), PP. 267-282.

J. TURNER, A. SCHELLER-WOLF AND S. TAYUR. 2011. **Scheduling of Dynamic In-game Advertisements**. *Operations Research*, **59**(1), pp.1-15.

V. TARDIF, S. TAYUR, J. REARDON, R. STINES AND P. ZIMMERMAN. 2010. **OR Practice--Implementing Seasonal Logistics Tactics for Finished Goods Distribution at Deere and Company's C&CE division**. *Operations Research*, **58**(1), pp. 1-15.

T. YUNES, D. NAPOLITANO, A. SCHELLER-WOLF AND S. TAYUR. 2007. **Building Efficient Product Portfolios at John Deere and Company**. *Operations Research*, **55**(4), pp. 615-629.

S. KEENE, D. ALBERTI, G. HENBY, A. J. BROHINSKY AND S. TAYUR. 2006. **Caterpillar's Building Construction Products Division Improves and Stabilizes Product Availability**. *Interfaces*, **36**(4), pp. 283-295.

L. TROYER, J. SMITH, S. MARSHALL, E. YANIV, S. TAYUR, M. BARKMAN, A. KAYA AND Y. LIU. 2005. **Improving Asset Management and Order Fulfillment at Deere's C&CE Division**. *Interfaces*, **35**(1), pp. 76-87.

*Finalist, Franz Edelman Competition, 2004.*

F. ERHUN AND S. TAYUR. 2003. **Enterprise-wide Optimization of Total Landed Cost at a Grocery Retailer**. *Operations Research*, **51**(3), pp. 343-353.

U. RAO, A. SCHELLER-WOLF AND S. TAYUR. 2000. **Development of a Rapid-Response Supply Chain at Caterpillar**. *Operations Research*, **48**(2), pp. 189-204.

S. TAYUR. 2000. **Improving Operations and Quoting Accurate Lead Times in a Laminate Plant**. *Interfaces*, **30**(5), pp. 1-15.

### **Invited Articles**

M. SODHI and S. TAYUR. 2022. **Make Your Business Quantum-Ready Today**. *MBR* (forthcoming).

V. SIDDHU AND S. TAYUR. 2022. **Five Starter Pieces: Quantum Information Science via Semi-definite Programs**. *Tutorials in OR*.

T. DAI AND S. TAYUR. 2022. **Designing AI-augmented Healthcare Delivery Systems for Physician Buy-in and Patient Acceptance**. *POM* (forthcoming).

R. DRIDI, H. ALGHASSI AND S. TAYUR. 2019. **Minimizing polynomial functions on a quantum computer.** arXiv: 1903.08270. *Science and Culture* (June 2019).

T. DAI AND S. TAYUR. 2019. **Healthcare Operations Management: A Snapshot of Emerging Research.** *MSOM*, **22**(5), pp. 869-1106, C2. <https://doi.org/10.1287/msom.2019.0778>.

S. TAYUR. 2017. **An Essay on Operations Management.** *MSOM*, **19**(4), pp. 526-523.

S. TAYUR. 2013. **Invited Paper: Planned Spontaneity for Product Availability.** *IJPR*, **51**(23-24), pp. 6844-6859.

J. CAMM AND S. TAYUR. 2010. **Editorial: How to Monetize the Value of OR.** *Interfaces*, **40**(6), pp. 446- 450.

P. KESKINOCAK AND S. TAYUR. 2004. **Quantitative Analysis for Internet Enabled Supply Chains.** *Interfaces*, **31**(2), pp. 70-89.

J. SWAMINATHAN AND S. TAYUR. 2003. **Tactical Supply Chain Models for E-Business.** *Management Science*, **49**(10), pp. 1387-1406.

S. TAYUR. 1997. **Recent Advances in Discrete-time, Single Product, Capacitated Production Inventory Systems.** *Sadhana*, **22**, pp. 45-68.

#### **Selected Conference Proceedings**

K. GAN, A. LI, Z. LIPTON AND S. TAYUR. **Causal Inference with Selectively Deconfounded Data.** *AISTATS 2021*.

D. BERNAL, K. BOOTH, R. DRIDI, H. ALGHASSI, S. TAYUR AND D. VENTURELLI. 2020. **Integer Programming techniques for minor-embedding in quantum annealers.** *CPAIOR*.

#### **Papers Under Review**

K. GAN, S. JIA, A. LI AND S. TAYUR. **Towards a Liquid Biopsy: Greedy Approximation Algorithms for Active Sequential Hypothesis Testing.**

*Winner of INFORMS Pierskalla Award, 2021.*

Y. TANG, A. SCHELLER-WOLF, S. TAYUR, E. PERITO AND J. ROBERTS. **Split Liver Transplantation: An Analytical Decision Support Model.**

*Winner of INFORMS Public Sector (PSOR) Best Paper Award, 2022.*

K. GAN, A. SCHELLER-WOLF AND S. TAYUR. **Personalized Treatment for Opioid Use Disorder.**

M. AKAN, Z. LEUNG, S. TAYUR, J. MARKMANN AND H. YEH. **MY-ATLAS: Mapping HCC Tumor Biology to Computing Exception Points.**

M. DELASAY AND S. TAYUR. **Conditions of Participation: Inducing Organ Discards and Increasing Deaths on Transplant Wait Lists?**

H. LI, J. XU AND S. TAYUR. **On-line to Offline (O2O) Platforms.**

## Selected Completed Working Papers in Quantum Computing

V. SIDDHU, A. CHATTERJEE, K. JAGANNATHAN, P. MANDAYAM, AND S. TAYUR. **Queue-Channel Capacities with Generalized Amplitude Damping.** arXiv:2107.13486.

V. SIDDHU, A. CHATTERJEE, K. JAGANNATHAN, P. MANDAYAM, AND S. TAYUR. **Unital Qubit Queue-channels: Classical Capacity and Product Decoding.** arXiv:2110.02800.

R. DRIDI, H. ALGHASSI AND S. TAYUR. 2018. **A Novel Algebraic Geometry Compiling Framework for Adiabatic Quantum Computations.** arXiv:1810.01440.

R. DRIDI, H. ALGHASSI AND S. TAYUR. 2018. **Homological Description of the Quantum Adiabatic Evolution with a View Toward Quantum Computations.** arXiv:1811.00675.

H. ALGHASSI, R. DRIDI AND S. TAYUR. 2019. **Graver Bases via Quantum Annealing with Application to Non-Linear Integer Programs.** arXiv:1902.04215.

R. DRIDI, H. ALGHASSI AND S. TAYUR. 2019. **Knuth-Bendix Completion Algorithm and Shuffle Algebras for Compiling NISQ Circuits.** arXiv:1905.00129.

H. ALGHASSI, R. DRIDI, A. GORDON ROBINSON AND S. TAYUR. 2019. **Quantum and Quantum-inspired Methods for de novo Discovery of Altered Cancer Pathways.** bioRxiv: 845719.

## Books and Book Chapters

T. DAI AND S. TAYUR (Editors). **Handbook of Healthcare Analytics**, 18 Chapters, Wiley, August 2018.

T. DAI AND S. TAYUR. **Evolutionary Trends in POM Research in Manufacturing**, Chapter 37 in S. Gupta and M. Starr (Eds.), *Handbook of Operations Management*, 2016.

S. TAYUR. **On Operations Management MBA Education in 21<sup>st</sup> Century Business Schools**, Chapter 7 in S. Nagesh (Ed.), *Cross Functional Inventory Research*, 2016.

P. KESKINOC AK AND S. TAYUR. **Due-date Management Policies**, Chapter 12 in Simchi-Levi, Wu and Shen (Eds.), *Handbook of Supply Chain Analysis in the eBusiness Era*, 2004.

J. SWAMINATHAN AND S. TAYUR. **Tactical Planning Models for Supply Chain Management**, Chapter 8 in Dekok & Graves (Eds), *Handbook of ORMS*, 2003.

S. TAYUR, R. GANESHAN AND M. MAGAZINE (Editors). **Quantitative Models for Supply Chain Management**, 27 Chapters, *Kluwer Academic Publishers*, December 1998.

- a. R. KAPUSCINSKI AND S. TAYUR. *Optimal Policies and Simulation Based Optimization for Capacitated Production-Inventory Systems.*
- b. S. GAVIRNENI AND S. TAYUR. *Value of Information Sharing and Comparison of Delayed Differentiation.*

- c. J. SWAMINATHAN AND S. TAYUR. *Stochastic Programming Models for Managing Product Variety*.
- d. A. SCHELLER-WOLF AND S. TAYUR. *Managing Supply Chains in Emerging Markets*.

J. SWAMINATHAN AND S. TAYUR. **Designing Task Assembly and Using Vanilla Boxes to Delay Product Differentiation: An Approach for Managing Product Variety in Managing Variety**, edited by Chris Tang and Teck Ho, *Kluwer Academic Publishers*, 1998.

### Grants and Contracts

1. DARPA (2022), Quantum Inspired Classical Computing, \$1.92 Million.
2. USRA (2020), Quantum Integer Programming, \$42,000.
3. USRA, NASA and Google (2017), Quantum Computing, 100 hours on 200 qubit D-Wave.
4. National Science Foundation (2014), \$260,000.
5. Microsoft (2008), \$150,000.
6. National Science Foundation (2000), \$160,000.
7. Caterpillar (1998), \$100,000.
8. Fellowships from IBM (1994, 1995, 1997), \$32,500, \$42,500, \$84,600.
9. Fellowship from Intel (1995), \$42,300.
10. CIScorp (1995), \$85,000.
11. Grant from SPIRC (1994), \$48,000.
12. Faculty Initiative Grant, Carnegie Mellon University, 1 year, \$3,500.
13. Grant from North Side Packing (1992), \$20,000.
14. Grant from GE-Coshocton (1992), \$10,000.

### Professional Activities

#### Seminars and Conference Talks

##### *Conference Activity:*

1. S. TAYUR. *Quantum Integer Programming*, POMS Conference (Invited Tutorial), 2021.
2. S. TAYUR. Video Intervention to increase decedent tissue donation by next-of-kin. INFORMS, 2021.
3. S. TAYUR. MI6: *Math, Money, Merriment, Matching, Mortality, Moonshots*, DSI Conference, Plenary, 2017.

4. S. TAYUR. *Combating Child Labor: Incentives and Information Disclosure in Global Supply Chains*. MSOM, 2017.
5. S. TAYUR. *On Operations Management*, MSOM Distinguished Fellow Talk, 2017.
6. S. TAYUR. MY-ATLAS: *Mapping HCC Tumor Biology to Compute Equitable Exception Points*, Johns Hopkins Symposium on Healthcare Operations, 2016.
7. S. TAYUR. *Nudge Video to Increase NOK Consent*, AMAT Conference, 2016. INFORMS Conference, 2021.
8. S. TAYUR. *Why I am an Academic Capitalist*, POMS (Washington, DC), Keynote, 2015.
9. S.TAYUR. *Inventory Planning with Limited Historical Data*, MSOM (U. Washington), 2014.
10. S. TAYUR. The Virtuous Cycle: From problem identification to value creation. SC SIG Thought Leader Keynote, 2014.
11. S.TAYUR. *Automated Trading*, MSOM (U. Michigan), 2011.
12. S.TAYUR. *Optimized Warfarin Dosage*, INFORMS Healthcare Conference (Montreal), 2011.
13. S. TAYUR AND G. FENU. *Supporting a New Price Sheet at Caterpillar*, MSOM (MIT), 2009.
14. S. TAYUR AND M. AKAN. *Optimizing Warfarin Dosage*, MSOM (MIT), 2009.
15. A. AKCAY, B. BILLER AND S. TAYUR. *Setting Inventory Targets with Finite Historical Demand*, MSOM (MIT), 2009.
16. S. TAYUR. *An Academic Capitalist Reflects at Half-Time*, MSOM (Baltimore) Plenary/Keynote, 2008.
17. S. TAYUR. *Publishing in OR and Making Money*, INFORMS (Seattle) Plenary, 2007.
18. S. TAYUR. *Entrepreneurship in OR*, INFORMS (Pittsburgh), 2006.
19. S. TAYUR. *Stable Order Availability at Caterpillar*, INFORMS, 2005
20. S. TAYUR. *Improving Asset Management and Order Fulfillment at Deere*, INFORMS, 2004.
21. S. TAYUR. *Simulation Based Optimization*, INFORMS San Jose, 2002.
22. S. TAYUR. *Why is Inventory Optimization Hard in Practice?* INFORMS San Jose, 2002; Council of Logistics Management (CLM) National Meeting, Chicago, 2003.
23. S. TAYUR. *What is missing to Enable Supply Optimization and Inventory Planning?* Supply Chain Thought Leaders Conference, Como, Italy, 2002; Cornell University, 2003.
24. F. ERHUN AND S. TAYUR. *Enterprise Wide Optimization of Net Loaded Cost at a Retail Grocer*, INFORMS Miami, 2001; Supply Chain Thought Leaders Conference, INSEAD, 2001.

25. S. TAYUR AND W. YANG. *Equilibrium Analysis of a Natural Gas Supply Chain*, INFORMS Miami, 2001; University of Southern California, April 2003.
26. S. TAYUR. *Implementing an Inventory Management System at a RTA Manufacturer*, INFORMS San Antonio, 2000.
27. S. TAYUR. *Energy Supply Chains*, INFORMS Philadelphia, November 1999.
28. F. ERHUN, P. KESKINOCAK AND S. TAYUR. *Capacity Reservation and Spot Purchase under Horizontal Competition*, INFORMS Philadelphia, November 1999.
29. S. GAVIRNENI AND S. TAYUR. *An Efficient Procedure for Computing Optimal Order Up-to Levels in a Non-stationary Inventory Model*, INFORMS Philadelphia, November 1999.
30. S. TAYUR. *Future Directions in OM Research*, INFORMS Seattle, October 1998.
31. U. RAO, A. SCHELLER-WOLF AND S. TAYUR. *Development of a Rapid-Response Supply Chain at Caterpillar*, INFORMS Seattle, October 1998; INFORMS Cincinnati, May 1999.
32. A. SCHELLER-WOLF AND S. TAYUR. *Reducing International Risk through Quantity Contracts*, INFORMS San Diego, May 1997.
33. M. DAWANDE, S. GAVIRNENI AND S. TAYUR. *Effective Heuristics for Multi-product Shipment Models*, INFORMS San Diego, May 1997.
34. J. SWAMINATHAN AND S. TAYUR. *Managing Product Variety*, UCLA Conference on Product Variety, January 1997; INFORMS San Diego, May 1997.
35. S. GAVIRNENI, R. KAPUSCINSKI AND S. TAYUR. *Value of Information in Capacitated Supply Chains*, INFORMS Washington DC, May 1996; INFORMS Atlanta, November 1996.
36. P. KESKINOCAK AND S. TAYUR. *Scheduling of Time-Shared Jet Aircraft*, INFORMS Washington DC, May 1996.
37. J. SWAMINATHAN AND S. TAYUR. *Managing a Broader Product Line by Delaying Differentiation Using Vanilla Boxes*, University of Florida, April 1996.
38. R. KAPUSCINSKI AND S. TAYUR. *100% Reliable Quoted Lead Times*, INFORMS1, New Orleans, October 1995; INFORMS Washington DC, May 1996.
39. F. KAPUSCINSKI AND S. TAYUR. *A Capacitated Production Inventory Model with Periodic Demand*, INFORMS New Orleans, October 1995.
40. J. SWAMINATHAN AND S. TAYUR. *Managing a Broader Product Line by Delaying Differentiation Using Vanilla Boxes*, INFORMS New Orleans, October 1995.
41. S. TAYUR. *Computing Optimal Stocking Levels for Common Components in an Assembly System*, ORSA/TIMS Detroit, 1994.
42. R. KAPUSCINSKI AND S. TAYUR. *Capacitated Priority Models for Stochastic Multi-Product Demand*, ORSA/TIMS Detroit, 1994.

43. S. TAYUR. *An Algebraic Geometry for Scheduling in Presence of Setups and Correlated Demands*, TECMAN Conference, 1994.
44. P.V. KAMESAM AND S. TAYUR. *Algorithms for Capacitated Multi-Echelon Assembly Systems*, 1993 Multi- Echelon Conference, IBM T.J. Watson Research Labs, Yorktown, 1993.
45. R. ANUPINDI AND S. TAYUR. *Managing Multi-product Systems Under Uncertainty*, ORSA/TIMS Chicago, 1993.
46. P. GLASSERMAN AND S. TAYUR. *Sensitivity Analysis of Base-Stock Levels in Multi-Echelon Production- Inventory Systems*, ORSA/TIMS Chicago, 1993.
47. S. TAYUR, R. THOMAS AND N. R. NATRAJ. *An Algorithm for Scheduling in Presence of Setups and Correlated Demands*, ORSA/TIMS San Francisco, 1993.
48. R. KANNAN, J. MOUNT AND S. TAYUR. *A Randomized Algorithm for the Component Commonality Problem*, ORSA/TIMS Anaheim, 1993.
49. S. TAYUR. *Analysis of a Kanban Controlled System*, ORSA/TIMS Nashville, 1991.

*Other Presentations:*

1. S. TAYUR. *Quantum Integer Programming*, UCL (2020), University of Cambridge (2020), Cornell University (2020, 2022), University of Minnesota (2021), Koc University (2021), MIT (2021) INSEAD (2022).
2. S. TAYUR. *Re-imagining US Transplantation*, University of Michigan (2020).
3. S. TAYUR. *Comfort Videos*, AOPO Compass, San Diego, 2020.
4. S. TAYUR. *Quantum Computing and Integer Optimization*. CMU Physics; CMU Chemical Engineering, 2019.
5. S. TAYUR. *Now to Wow*. PNC DevOps Conference, 2019.
6. S. TAYUR. *Q-Branch and MI6: A Playful Introduction to Operations Management*. CMU, 2017.
7. S. TAYUR. *New Initiatives in Deceased Donor Organ Transplantation*, Stanford (Economics), Stanford (Medical, Lucile Packard), UCSF (Transplant Grand Rounds), UC Berkeley (Haas), 2017.
8. S. TAYUR. *OR/OM Entrepreneurship in the 21<sup>st</sup> Century*, University of Michigan, 2016.
9. S. TAYUR. *MI6 and Q-Branch for 21<sup>st</sup> Century Operations Management*, Cornell University, 2016.
10. S. TAYUR. *Three Initiatives in Deceased Donor Organ Transplantation*, U. Chicago, 2015.
11. S. TAYUR. *OR/OM Entrepreneurship in the 21<sup>st</sup> Century*, Cornell University, 2014.
12. S. TAYUR. *OrganJet*, HBS 2013, 2014, 2015, 2016, 2017, 2018, 2019; HKS 2016, 2017, 2018, 2019, 2022. MIT, 2014.

13. S. TAYUR. *Rental Inventory Models*, Massachusetts Institute of Technology, 2013.
14. S. TAYUR. *Combating Child Labor*, Massachusetts Institute of Technology, 2013.
15. S. TAYUR. *OM in Practice*, Stanford Graduate School of Business, 2012; University of Texas-Dallas, 2013.
16. S. TAYUR. *Planned Spontaneity*, Massachusetts Institute of Technology, 2013.
17. S. TAYUR. *Contemporary Topics in Global Operations*, UCLA, 2012.
18. S. TAYUR. *Enterprise Inventory Optimization*, University of Michigan, 2011.
19. S. TAYUR. *OrganJet Corporation*, Boston College, 2011; Harvard, 2012; MGH 2012; UPMC, 2013.
20. S. TAYUR. *EIO and Sustainability*, Massachusetts Institute of Technology, 2010.
21. S. TAYUR. *How to Monetize the Value of OR*, Kellogg's (Northwestern University), 2010.
22. S. TAYUR. *Seasonal Logistics at Deere*, Massachusetts Institute of Technology, 2009, 2012.
23. S. TAYUR. *Bridging Industry and Academia*, UNC, 2008.
24. S. TAYUR. *Enterprise Inventory Optimization*, IBM, 2003.
25. S. TAYUR. *What is missing to enable Supply Optimization and Inventory Planning?* Supply Chain Thought Leaders Conference, Como, Italy, 2002; Cornell University, 2003.
26. F. ERHUN AND S. TAYUR. *Enterprise Wide Optimization of Net Loaded Cost at a Retail Grocer*, Wharton, 2001, INSEAD, 2001, Cornell, 2002.
27. S. TAYUR AND W. YANG. *Equilibrium Analysis of a Natural Gas Supply Chain*, NYU, 2001, Columbia Business School, 2001, University of Michigan, 2001, Cornell University, 2002.
28. S. TAYUR. *Internet Enabled Supply Chains*, MIT Sloan School, 2000.
29. S. TAYUR. *Supply Chain Management and E-Business Analytics*, Harvard Business School, 2000; Case Western Reserve University, 2000.
30. F. ERHUN, P. KESKINOCAK AND S. TAYUR. *Capacity Reservation and Spot Purchase under Horizontal Competition*, GSB, Stanford University; Purdue University, 2001.
31. S. TAYUR. *Planned Spontaneity*, Supply Chain Thought Leaders Conference, Brussels 1999; Cornell University, 1999.
32. U. RAO, A. SCHELLER-WOLF AND S. TAYUR. *Designing a Rapid-Response Supply Chain at Caterpillar*, Washington University, 1998.
33. S. GANIRNENI, R. KAPUSCINSKI AND S. TAYUR. *Value of Information and Comparison with Delayed Differentiation*, Stanford SCM Round Table, 1998, Santa Cruz, 1997; Harvard Business School, 1997; Wharton, 1997; Kellogg, 1998.



34. J. SWAMINATHAN AND S. TAYUR. *Managing a Broader Product Line by Delaying Differentiation Using Vanilla Boxes*, Columbia University, Fall 1995; MIT, Fall 1997.
35. S. TAYUR. *An Algebraic Geometry Algorithm for Scheduling in Presence of Setups and Correlated Demands*, MIT, 1996, 1997; EPFL, Zurich, 1997; Penn State, 1996; Michigan, IEOR, 1996; Northwestern University (Kellogg), 1995; Carnegie Mellon University, 1993.
36. S. TAYUR. *Two New Solution Methods for Stochastic Programming*, Columbia Business School, 1994.
37. S. TAYUR. *A Randomized Algorithm for Optimizing Over Certain Convex Sets*, Carnegie Mellon University, 1993.
38. S. TAYUR, *Implementing a Kanban System*, GE Management School, Crotonville, NY, 1992; Carnegie Mellon University, 1992.

### **Leadership Roles, Editorial Roles and Major Meeting Activities**

1. *Department Editor*, Management Science, 2018-.
2. *Organizing Committee*, Johns Hopkins Symposium on Healthcare Operations: When Organ Transplantation Meets Operations Research, 2016.
3. *Department Editor*, POMS Journal, 2015-.
4. *INFORMS Award Committee*, 2012, 2013.
5. *Editorial Committee*, MSOM, 2011-2012.
6. *Research Advisory Committee*, CBI, 2002-2005.
7. *President*, Manufacturing and Services Operations Management Society (M&SOM), 2001-2002.
8. *Co-Chair*, 5th Annual Supply Chain Thought Leaders Conference, Lake Como, Italy, 2002.
9. *Chairperson*, Annual GSIA OM Case Competition for MBAs, 1996-2001.
10. *Associate Editor*, Operations Research, Management Science, IIE Transactions, NRLQ.
11. *Senior Editor*, MSOM Journal.
12. *Area Editor*, POMS Journal.
13. *Editorial Board*, Optimization and Engineering.
14. *Chair*, MSOM Student Paper Competition, 1998.
15. *Judge*, Nicholson Student Paper Competition.
16. *Organizer* of Sessions at ORSA/TIMS Meetings in Washington D.C. (1996), Detroit (1994), Chicago (1993), and San Francisco (1993); Supply Chain Thought Leader's Conference, Como (2002).



17. *Referee* for: MSOM, Management Science, Operations Research, Mathematics of Operations Research, Mathematical Programming, Interfaces, Omega, IIE Transactions, SIAM Journal, Naval Research Quarterly, European Journal of OR, Queuing Systems, Production and Operations Management, IBM Journal of Research and Development, Stochastic Models. Book Reviewer for several textbooks.
18. *NSF Panelist* (on several panels).