July 1, 2017

SUNDER KEKRE

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Vasantrao Dempo Chair
Professor of OperationManagement

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PROFESSIONAL OBJECTIVES

Teaching, theoretical research and field research in partnership with industry on critical problems at the interface of manufacturing/ operations and other functional areas; develop ties and projects for Carnegie Mellon.

EDUCATION

Date	Degree	Major(s)	School
9/84	Ph.D.	Production and Operations Mgmt.	University of Rochester
2/83	M.S.	Management Science	University of Rochester
5/77	PGDBM (MBA)	Production Mgmt.	Xavier Institute, India
5/72	B. Tech. (Ranked 2nd out of 205)	Mech. Engineering	Indian Institute of Technology, New Delhi

HONORS

Dempo Chair Professorship 2016

Bosch Chair Professorship 2006

Xerox Research Chair (co-awardee) for 1988-1989

Fellowship from the Graduate School of Management (GSM), University of Rochester, 7/80 to 7/84

Dean's List, 1981 and 1982, GSM, University of Rochester

TATA Merit Award, Xavier Institute, 1977

Merit Scholarship, 1967-1972, Indian Institute of Technology

National Merit Certificate, 1967, Government of India

TEACHING EXPERIENCE

1995	Promoted to Full Professor
1992	Promoted to Associate Professor with indefinite tenure
1984	Assistant Professor, G.S.I.A., Carnegie Mellon. Taught M.S.I.A. and I.M. courses in the area of Production Management, and organized doctoral seminars
1983	Adjunct Faculty, Rochester Institute of Technology, Rochester Taught undergraduate courses in the Production area
1982	Adjunct Faculty, St. John Fisher College, Rochester Taught undergraduate courses in the Production area
1981	Teaching Assistant, Operations Management, Graduate School of Management, Rochester

INDUSTRIAL WORK EXPERIENCE

Period

78-80	TATA STEEL, India Senior Engineer
77-78	TATA STEEL Asst. to Manager

74-77   TATA STEEL Project Engineer

RESEARCH ON PROBLEMS IN INDUSTRY

Companies: Chrysler, H. J. Heinz, Kennametal, Eastman Kodak Company, G. M., LTV Steel, Ford, I.B.M., PricewaterhouseCoopers, Otis, GENCO, Medrad, Caterpillar, Mellon Bank, Equitable Resources, Honeywell, Highmark Insurance

Topics: Identifying drivers of manufacturing costs, impact of modern Information System Technologies on manufacturing systems performance, and simultaneous cost engineering of product and process designs, assessment of E-capability

RESEARCH PROJECTS

1   ***PNC Center for Financial Services Innovation***, funded at $ 1 million per year approx. from 2012 till date to investigate various aspects related to current and future financial services in retail banking. Current responsibility- *Director of the Center*. So far 50 research projects funded at Carnegie Mellon across various units involving more than 100 researchers

2   Assessing the Transition from Web 1.0 to Web 2.0 at Bosch Group, Carnegie Bosch Institute, with B. Sun and L. Ma, 100k, 2011-2013

3   Impact of Social Media at VERIZON sponsored by the Center for Future of Work, Carnegie Mellon University, (30K)

4.   MOST RECENT: IBM Faculty Award (40K) for Service Contracts for the Future 2010. Funding for Center for Business Solutions on "Business Intelligence Projects" with Equitable Gas (total 180K), Highmark Insurance (45K), Dormont Manufacturing (30K), and Honeywell (50K)

5.   TIDE Technology Insertion Project: TIDE grant awarded to CMU to study technology insertion in small manufacturers. The award covers creating methodologies for technology insertion, as well as studying the impact of technical and human factors, funding till date $ 2.5 Million

6.   MBA Projects: Led several funded projects for MBA students and faculty; four projects with Caterpillar, GENCO, MSA and Equitable Resources, total funding 180K

PAST PROJECTS

1. JSTMP Grant: Funding from the Air Force Office of Scientific research to study technology development and management In Japan, $ 255,000, 1997

2. Center Projects: Two projects at the Center for Management of Technology. These projects were the "Flexible Assembly Systems Studies" funded by G.M., co-investigator G. Thompson; and "Design for Manufacturability: Costing of Design Alternatives" by NSF, co-investigators S. Datar and T. Mukhopadhyay, 1988-1990, total funding $250,000

3. Heinz U.S.A.: Heinz funded two studies for Masters Students, "Logistics of Tomato Paste Movement" and "Analysis of PPIC Systems to Improve Turns," $15,000, 1988-90

4. Eastman Kodak: Service 2000 Project, Changing Role of Field Engineers, $15,000, 1989

5. Information Networking Institute Grant: Project with co-investigator T. Mukhopadhyay, "A Contingency Approach to Determine the Operational Implications of EDI in the Aerospace Industry," $62,000, 1990

6. Bosch Institute Grant: "Strategic Management of Capacity," with co-investigator T. Morton, $50,000, 1991

7. Information Networking Institute: "The Impact of Electronic Data Interchange Technology on the Organization," with P. Goodman and T. Mukhopadhyay, $70,000, 1991

8. Automotive Industry Action Group Grant: Studies on EDI at Chrysler, and LTV, with T. Mukhopadhyay and K. Srinivasan, $50,000, 1991

9. Technology Transfer Projects: Grant from Semi-Conductor Research Corporation, $39,000, 1992, Grant from American Express $10,000, 1992

10. Otis Service 2000 Project: Marketing Strategy for NON-OTIS Equipment Maintenance Business, $20,000 budget, 1993

RESEARCH PAPERS

Publications (most recent)

Strategic Management of Operations in the Emergency Department, with Arvind Venkat, G.G. Hegde, Jen Shang and T. Campbell, in *Production and Operations Management*, November 2015, pp. 1706-1723

Racial Disparities in Reimbursement for Physician Professional Services in the Emergency Department, with Arvind Venkat, Uchenna Onyekwere, John M. O'Neill, Gajanan G. Hegde, Jennifer Shang, *American Journal of Emergency Medicine*, Volume 32, Number 9, September

2014, 1060-1067

Business Analytics assists Transitioning Traditional Medicime to Telemedicine at Virtual Radiologic, with Fatma Karzan, Ersin Koropeoglu, Dr Pat Basu etc., *Interfaces,* accepted Feb 2014

Optimal procurement in Energy Contracts, with Nicoli Secomandi, *Manufacturing And Service Operations Management,* accepted Nov 2013

Strategic Analysis of Technolgy and Capacity Investments in the LNG industry, with Erkut Sonmez , Nicoli Secomandi and A. Wolf, *EJOR*   Dec 2012

Older Publications:

1. "Ushering Buyers into Electronic Channels: An Empirical Analysis" with N. Langer, C. Forman and B. Sun, Information Systems Research, accepted and forthcoming, 2011-2012

2. "A Large US Retailer Selects Transportation Carriers under Diesel Price Uncertainty" with J. Turner, B. Peterson, S.H. Cho and A. Wolf, Interfaces, accepted and   forthcoming, 2011-2012

3. "Valuation of Storage at LNG Terminals" with G. Lai, M. Wang, A. Wolf and N. Secomandi, accepted Operations Research, 2010

4. "Component Based Technology Transfer in the Presence of Potential Imitators" with J. Sun and L. Debo, Management Science, 2010

5. "Balancing Risk and Efficiency at Mellon Bank" with E. Sonmez, N. Secomandi and K. West, Manufacturing and Service Operations Management, Vol. 11, No 1, Winter 2009, Pages 160-173

6. "Assessing the Impact of RFID on Return Center Logistics" with C. Forman, N. Langar and A. Wolf, Vol. 37, No 6, Interfaces, November-December 2007

7. "The Impacts of Customization on Product and Process Performance" with V. Hegde, P. Tadikamallah and S. Rajiv, Journal of Production and Operations Management Society, Winter 2005

8. "Interdisciplinary and Inter-organizational Research; Establishing the Science of Enterprise Networks" with C. Buhman and J. Singhal, Journal of Production and Operations Management Society, Winter 2005

9. "Risk Based Integration of Strategic and Tactical Planning" with U. Rao, S. Sarthi and J. Yi, Annals of Operations Research Special Issue, Vol. 132, November 2004

10. "New Product Design and Manufacturing: Managing Cost and Time to Market" with A. Bajaj and K. Srinivasan, special issue of Management Science, Operations and Marketing Interface, Vol. 50, April 2004

11. "Reconfiguring a Remanufacturing Line at Visteon, Mexico" with J. Swaminathan, U.Rao and J. Zhang, Interfaces, December 2003

12. "Product Differentiation and Commonality in Design: Balancing Revenue and Cost Drivers" with P. Desai, S. Radhakrishnan and K. Srinivasan, special issue of Design and Development, Management Science, January 2001

13. "Drivers of Customer Satisfaction for Software Products: Implications for Design and Service Support" with M. Krishnan and K. Srinivasan, Management Science, 1995

14. "Business Values of Information Technology: A Study of Electronic Data Interchange" with T. Mukhopadhyay and S. Kalathur, MIS Quarterly, June 1995

" BEST PAPER AWARD FOR 1995 by MIS Quarterly"

15. "The Impact of Re-sequencing on Parallel Assembly Systems" with H. Gurnani and A. Kumar, Journal of Manufacturing Systems, Society of Manufacturing Engineers, Vol. 14, No. 2, 1995

16. "New Product Development Structures & Time to Market, conditional acceptance, with S. Datar, C Jordan, S. Rajiv and K. Srinivasan, Special Issue on Frontier Research in Manufacturing, Management Science, 1995

17. "Operating Decisions, Supplier Availability and Quality: An Empirical Study" with B. P. S. Murthy and K. Srinivasan, Special Issue, Journal of Operations Management, 1995

18. "Costs, Quality and Customer Satisfaction with Software Products: A Field Study" with M. Krishnan, C. Kriebel, T. Mukhopadhyay, M. Kellner and K. Srinivasan, Series on Quality, eds. R. Jaikumar, U. Karmarkar, Harvard Business Press, 1994

19. "Impact of Electronic Data Interchange Technology Support on JIT Shipments" with K. Srinivasan and T. Mukhopadhyay, Vol. 40, No. 10, Management Science, 1994

20. "Simultaneous Cost Engineering & Management of Complexity" with S. Datar, T. Mukhopadhyay and K. Srinivasan, The Accounting Review, Vol. 68, No. 3, July 1993

21. "Impact of Material Flow Complexity and Technology Support on JIT Performance: An Empirical Investigation" with K. Srinivasan and T. Mukhopadhyay, Management Science, 1993

22. "Impacts of Electronic Data Interchange Technology on Quality Improvement and Inventory Reduction Programs: A Field Study" with T. Mukhopadhyay, accepted, Journal

of Manufacturing and Operations Management, International Journal of Production Economics, 28, Pages 265-282, 1992

23. "ECOs and Time Delays: A Field Investigation" with G. Hegde and S. Kekre, accepted, Journal of Manufacturing and Operations and Management, published International Journal of Production Economics, 28, Pages 341-352, 1992

24. "Multi-item Batching Heuristics for Minimization of Queuing Delays" with U. S. Karmarkar and S. Kekre, European Journal of Operations Research, 58, Pages 99-111, 1992

25. "Software Cost Models for Early Estimation of Process Control Applications" with T. Mukhopadhyay, I.E.E.E. Transactions on Software Engineering, Vol. 18, No. 10, October 1992

26. "Overloaded Overheads: Activity Based Cost Analysis of Material Handling in Cell Manufacturing" with E. Svaan and S. Datar, Special Issue on Cell Manufacturing, Journal of Operations Management, 1991

27. "A Logistics Analysis at Heinz, U.S.A." with P. Nandakumar, S. Rajgopalan and T. Powell, Interfaces, 1990

28. "Wider Produce Line: Is It Necessary to Achieve Success?" with K. Srinivasan, Management Science, October 1990

29. "Predicting the Master Schedule from Partially Known Demands" with T. Morton and T. Smunt, International Journal of Forecasting, U.K., 1988

30. "Sched-Star, A Price Based Shop Scheduling Module" with T. Morton, S. Lawrence and S. Rajgopalan, Journal of Manufacturing and Operations Management, Vol. 1, No. 2, 1988

31. "Customer Priorities and Lead Times in Long Term Supply Contracts" with U. Udayabhanu, Journal of Manufacturing and Operations Management, Vol. 1, No. 1, 1988

32. "Relevant Costs, Congestion and Stochasticity in Production Environments" with R. Banker and S. Datar, Journal of Accounting & Economics, Vol. 10, No. 3, 1988

33. "Manufacturing Configuration and Mix Flexibility" with U. Karmarkar, Journal of Manufacturing Systems, Society of Manufacturing Engineers, Vol. 6, No. 4, 1987

34. "Capacity Analysis of a Manufacturing Cell" with U. Karmarkar and Sham Kekre, Journal of Manufacturing Systems, Society of Manufacturing Engineers, Vol. 6, No. 3, 1987

35. "The Dynamic Lot Sizing Problem with Start-up and Reservation Costs" with U. Karmarkar and Sham Kekre, Operations Research, Vol. 35, No. 3, May-June, 1987, pgs. 389-398

36. "Performance of a Manufacturing Cell with Increased Product Mix" Department of

Manufacturing and Automated Production, IIE Transactions, September, 1987

37. "Batching and Capacity Models for Manufacturing Cells with Metered Flow" with I. Baybars, F. Bogaert and G. Hirsch, Journal of Manufacturing Systems, Vol. 5, No. 2, Society of Manufacturing Engineers, 1986

38. "Lot Sizing and Lead Time Performance in Manufacturing Cell" with U. Karmarkar, Sham Kekre and S. Freeman, Interfaces, 1985, pp. 1-9 and Production Planning, Scheduling and Inventory Control: Concepts, Techniques and Systems, Third Edition, IE and Management Press, IIE, Pages180-188, 1986

39. "Lotsizing in Multi-Item Multi-Machine Jobshops"   U. Karmarkar and S. Kekre, IIE Transactions, September 1985

Other Publications

40. "Business Value of I.T. A Study of EDI" with T. Mukhopadhyay and S. Kalathur, Exploring Information Systems Research Approaches, Readings and Reflections, ed by R. Galliers, M. Markus and S. Newell, 2007

41. "Levers for Improving NPD Time and Financial Performance" with A. Bajaj, and K. Srinivasan, Managing Business Interfaces: Marketing, Engineering and Manufacturing Perspectives, Edited A. Chakravarty, J. Eliashberg, 2003

42. "Managing Variety in Software Features" with M. Krishnan, T. Mukhopadhyay and K. Srinivasan, Product Variety Management, editors C. Tang and T. Ho, Kluwer Publishers, 1999

43. "Modeling Impacts of Electronic Data Interchange" with T. Mukhopadhyay and K. Srinivasan, Quantum Models for Supply Chain Management, editors S. Tayur, R. Ganeshan and M. Magazine, Kluwer Publishers, 1998

44. "The Knowledge Factory: Competitive Structures for Absorption of Market & Technical Information" with C. Jordan & K. Srinivasan, Proceedings of 2nd International Product Development Conference on New Approaches to Development Engineering, Gothenburg Center for Work Science, May, 1994

45. "Costs of Product and Process Complexity" with R. Banker, S. Datar and T. Mukhopadhyay, Editor Robert Kaplan, Measures for Manufacturing Performance, Harvard Business School, 1990

46. "Asynchronous Parallel Paint Systems: Sequencing and Control Issues in JIT Environment" with I. James and N. Lafond, IEEE Proceedings, International Conference on CIM, May 1988

47. "Capacity Choice, Work-in-Progress Inventory and Throughput: A Simulation Study" with

G. G. Hegde, K. Ramamurthy and P. Tadikamallah, Proceedings of the Winter Simulation Conference, San Diego, December 1988

48. "Multi-Agent Systems and Organizational Structure: The Support of Hospital Patient Scheduling" with A. Kumar, M. Prietula and P. S. Ow, Proceedings of Third International Conference on Expert Systems and the Leading Edge in Production and Operations Management, May 1989

49. "The System Linkages Between Quality and Flexibility in the High Volume F.A.S." with N. Lafond and S. Vrhovac, Proceedings of Third International Conference in Flexible Manufacturing Systems, TIMS/ORSA, Boston, 1989

50. "Managing Operational Costs in Flexible Assembly with Asynchronous Flows" with G. Thompson and N. Lafond, Proceedings of Third International Conference in Flexible Manufacturing Systems, TIMS/ORSA, Boston, 1989

WORKING PAPERS UNDER REVIEW/ REVISION

   1. " Novel Instruments for Meauring Emergency Physician Performance in a Multi facility   Network", with Dr. Venkat, Dr. Hegde, Dr. Jen Shang and Krista Foster, MSOM , Revision (2), 2017

   2. " Managing Complex Negative services: Use of Ethics Committees and Consultation in healthcare institutions" with Dr Venkat, V. Mittal, Daniel Zyung, G.Hegde and Jen Shang, Journal of Marketing Research, Revision(2) 2017

   3.   "An Evaluation of the Relationship Between Outdoor Airborne Pollutants and Emergency Department Presentations for Acute Respiratory Conditions ", Dr. Deborah Gentile, Dr. G. Hegde, Dr.Jennifer Shang, Dr.Albert Presto, and Dr.Arvind Venkat, July 2015

RESEARCH PRESENTATIONS/CONFERENCES

1. "Assessing the Impact of RFID on Return Center Logistics," with N. Langar, C. Forman and A. Wolf, INFORMS 2006, Pittsburgh

2. "Ushering Buyers into Electronic Channels," with C. Foreman, N. Langar and B. Sun, SCER 07, Conference on Third Statistical Challenges in E-Commerce Research

3. "Panel Discussion on Emerging Markets: Implications for Inter-disciplinary Research in Operations Management," with A. Roth, U. Karmarkar, and V. Krishnan, INFORMS, 2006

4. Panel Discussant on "State of Art in Empirical Research," Workshop at the Wharton School of Business, 2006

EDITORIAL AND PROFESSIONAL RESPONSIBILITIES

Advisory Board, Indian Institute of Management, Rohtak, India, 2011

Tepper fall 2006 conference on "Integrated Finance and Operations Management" and Special issue of Management Science", co-edited by Birge (Chiacago), Huchzermeie (Koblenz) , Couvelis (Wash. Univ.) and Seppi (Tepper)

Refereed for Management Science, O.R.

RECENT EDUCATIONAL ACTIVITIES

Expansion of Capstone Course: "*Managing The Enterprises of The Future*" in partnership with A.T. Kearney, with enrollment of 100 + students (75 from Tepper) with 16 large companies (CISCO, Siemens, P& G, GSK, Kaiser, Emerson etc.). Projects were also offered to Flex Mode and Heinz MISM students that have significant data analytics focus .

Middle East Trek 2012:   23 students participating with academic content from CMUQ faculty and industry   leaders in Dubai and Doha, alumni events in Doha and Dubai.

Advisor for SABA and Ops Clubs till date to plan international Ops case and other activities.

MOST RECENT DOCTORAL THESIS SUPERVISION

Doctoral Program (Chair or member of thesis committee(s); reader of summer paper(s))

Co-Chair of Committee: Michele Dufalla