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Education

- Ph.D. Industrial Engineering (Operations Research) (1985)
State University of New York at Buffalo
(GPA: 4.0. Awarded Ph.D with Distinction)
Advisors: Mark H. Karwan and Stanley Zionts
- M.Tech. Industrial Engineering (1977)
Indian Institute of Technology, Madras
- B.Tech. Chemical Engineering (1975)
Indian Institute of Technology, Madras

Research Streams

- *Healthcare Analytics*
- *Cloud and High Performance Computing – Availability Analytics*
- *Cloud and High Performance Computing – Markets and Contracts*
- *Conceptual Modeling & Database Systems*
- *Operations & Decision Analysis*

Employment

Professor

Department of Management Science & Systems
School of Management
State University of New York at Buffalo
(September 1998 -)

Associate Professor

Department of Management Science & Systems
State University of New York at Buffalo
(September, 1990 – September 1998)

Assistant Professor

Department of Management Science & Systems
State University of New York at Buffalo
(September, 1984 - September, 1990)

Gopal, R. D. and Ramesh, R., "The Query Clustering Problem: A Set Partitioning Approach," *IEEE Transactions on Knowledge and Data Engineering*, Vol. 7, No. 6, pp. 885 - 899, 1995.

Gopal, R. D. Ramesh, R. and Zions, S., "Access Path Optimization in Relational Joins," *ORSA Journal on Computing*, Vol. 7, No. 3, pp. 257-268, 1995.

Ramesh, R. and Ryan, B., "Optimal File Allocation and Report Assignment in Distributed Information Networks: Theory and Experimental Results," *Naval Research Logistics*, Vol. 37, No. 1, pp. 165-181, 1990.

Ramesh, R. Babu, A. J. G. and Kincaid, J.P., "Variable-depth Trie Index Optimization: Theory and Experimental Results," *ACM Transactions on Database Systems*, Vol. 14, No. 1, pp. 41-74, 1989.

Ramesh, R. and Drury, C. G., "EARS: An Online Bibliographic Search and Retrieval System Based on Ordered Explosion," *Information Processing and Management*, Vol. 23, No. 3, pp. 225-238, 1987.

Operations & Logistics

Vroblefski, M., Ramesh, R. and Zions, S., "A Unified Framework for the Approximation of General Telecommunication Networks," *European Journal of Operational Research*, Vol. 163, No. 2, pp. 482-502, June 2005.

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Vroblefski, M., Ramesh, R. and Zions, S., "General Open and Closed Queuing Networks with Blocking: A Unified Framework for Approximation," *INFORMS Journal on Computing*, Vol. 12, No. 4, pp. 299-316, 2000.

Vroblefski, M., Ramesh, R. and Zions, S., "Efficient Lot-Sizing Under a Differential Transportation Cost Structure for Serially Distributed Warehouses," *European Journal of Operational Research*, Vol. 127, No. 3, pp. 574-593, 2000.

Bhattacharjee, S. and Ramesh, R., "A Multi-Period Profit Maximizing Model for Retail Supply Chain Management: An Integration of Demand and Supply Side Mechanisms", *European Journal of Operational Research*, Vol. 122, No. 3, pp. 584-601, 2000.

Aldakhilallah, K. A. and Ramesh, R., "An Integrated Framework for Automated Process Planning: Design and Analysis," *International Journal of Production Research*, Vol. 36, No. 4, pp. 939-956, 1998.

Ramesh, R., Prasad, S. Y. and Thirumurthy, M., "Flow Control in Kanban Based Multicell Manufacturing: I. A Structural Analysis of General Blocking Design Space," *International Journal of Production Research*, Vol. 35, No. 8, pp. 2327-2343, 1997.

Ramesh, R., Prasad, S. Y. and Thirumurthy, M., "Flow Control in Kanban Based Multicell Manufacturing: II. Design of Control Systems and Experimental Results," *International Journal of Production Research*, Vol. 35, No. 9, pp. 2413-2427, 1997.

Aldakhilallah, K. A. and Ramesh, R., "Recognition of Minimal Feature Covers of Prismatic Objects: A Prelude to Automated Process Planning," *International Journal of Production Research*, Vol. 35, No. 3, pp. 635-650, 1997.

Diaby, M. and Ramesh, R., "The Distribution Problem with Carrier Service: A Dual Based Penalty Approach," *ORSA Journal on Computing*, Vol. 7, No. 1, pp. 24-35, 1995.

Ramesh, R., Yoon, Y. S. and Karwan, M. H., "An Optimal Algorithm for the Orienteering Tour Problem," *ORSA Journal on Computing*, Vol. 4, No. 2, pp. 155-165, 1992.

Rao, H. R., Thirumurthy, M. and Ramesh, R., "A Dynamic Learning Model for On-Line Quality Control Using the Taguchi Approach," *Applied Artificial Intelligence*, Vol. 6, No. 4, pp. 457-482, 1992.

Ramesh, R., and Brown, K., "An Efficient Four-Phase Heuristic for the Generalized Orienteering Problem," *Computers and Operations Research*, Vol. 18, No. 2, pp. 151-165, 1991.

Ramesh, R. and Cary, J. M., "An Efficient Approach to Stochastic Jobshop Scheduling: Algorithms and Empirical Investigations," *Computers & Industrial Engineering*, Vol. 18, No. 2, pp. 181-190, 1990.

Ramesh, R. and Sylla, C., "A Model for Instructor Training Analysis in Simulation Based Flight Training," *IEEE Transactions on Systems, Man and Cybernetics*, Vol. 20, No. 5, pp. 1070-1080, 1990.

Ramesh, R. and Sylla, C., "A Framework for Optimal Design of Instructor/Operator Stations in Flight Simulators," *IEEE Transactions on Systems, Man and Cybernetics*, Vol. 20, No. 3, pp. 571-581, 1990.

Decision Analysis

Ramesh, R., Karwan, M. H. and Zionts, S., "An Interactive Method for Bicriteria Integer Programming," *IEEE Transactions on Systems, Man and Cybernetics*, Vol. 20, No. 2, pp. 395-403, 1990.

Ramesh, R., Karwan, M. H. and Zionts, S., "Interactive Multicriteria Linear Programming: An Extension of Method of Zionts and Wallenius," *Naval Research Logistics*, Vol. 36, No. 3, pp. 321-335, 1989.

Ramesh, R., Karwan, M. H. and Zionts, S., "Preference Structure Representation Using Convex Cones in Multicriteria Integer Programming," *Management Science*, Vol. 35, No. 9, pp. 1092-1105, 1989.

Ramesh, R., Karwan, M. H. and Zionts, S., "Theory of Convex Cones on Multicriteria Decision Making," *Annals of Operations Research*, Vol. 16, pp. 131-148, 1988.

Ramesh R. and Chandra Sekar, G., "An Integrated framework for Decision Support in Corporate Planning," *Decision Support Systems*, Vol. 4, pp. 365-375, 1987.

Chandra Sekar, G. and Ramesh, R., "Microcomputer Based Multiple Criteria Decision Support Systems for Strategic Planning," *Information and Management*, Vol. 12, No. 4, pp. 163-172, 1987.

Ramesh, R., Karwan, M. H. and Zionts, S., "A Class of Practical Interactive Branch and Bound Algorithms for Multicriteria Integer Programming," *European Journal of Operational Research*, Vol. 26, No.1, pp. 161-172, 1986.

Papers under Review

Yaraghi, N., Ramesh, R. and Tayi, G., "Pay, Pat, and Claw Back: Incentivizing Service Providers' Participation in On-Demand Digital Platforms" under revision for second review in *Management Science*.

Eftekhari, S. and Ramesh, R., "Impact of Health Information Exchanges on Patient Movement: Homecoming or Doctor-shopping" under first review in *Management Science*, January 2023.

Aziz, Y., Guo, Z. and Ramesh, R., "Forward Contract Mechanisms for Optimal Service Sourcing in On-Demand Digital Platforms", to be submitted to *Information Systems Research* in April 2023.

Journal Volumes, Books and Chapters

Gopal, R. D. and Ramesh, R., (Editors), Proceedings of the Eighteenth Annual Workshop on Information Technologies and Systems (WITS), Paris, France, December 13-14, 2008.

Sharman, R., Kishore, R., and Ramesh, R., (Eds.) "Ontologies – A Handbook of Principles, Concepts and Applications in Information Systems", Springer, Boston, MA, 2007.

Chen, H, Raghu, T. S., Ramesh, R., Vinze, A. and Zeng, D., (Eds.) "National Security", Handbook in Information Systems, Volume 2, Elsevier, Netherlands, 2007.

Ramesh, R. and Kishore, R., (Eds.) "Ontologies in the Context of Information Systems," special issue of the *Journal of AIS*, Vol. 8, Issue, 2007.

Geng, X., Gopal, R. D., Ramesh, R. and Whinston, A. B., "Topographical Leveraging of Sharable Services: The Concept of Capacity Provision Networks," in *Electronic Commerce and the Digital Economy*, Michael Shaw (Ed.), M.E. Sharpe Publishers, 2006.

Geng, X., Gopal, R. D., Ramesh, R. and Whinston, A. B., "Capacity Provision Networks: A Technology Framework and Economic Analysis of Web Cache Trading Hubs," in *Innovations in Financial and Economic Networks*, Anna Nagurney (Ed.), Edward Elgar Publishers, 2003.

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Organizations and Pervasive/Mobile Technologies”, (Editors), *Proceedings of IEEE Academia/ Industry Working Conference on Research Challenges (AIWoRC’00)*, IEEE Computer Society, Los Alamitos, CA, April 2000 (370 pages).

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Ramesh, R., “Principles of Knowledge-based Systems,” Chapter in *Applications of Artificial Intelligence - Manufacturing Theory and Practice*, Institute of Industrial Engineers (IIE), Atlanta, Georgia, 1989.

Ramesh, R., “Multicriteria Integer Programming,” Ph.D Dissertation, State University of New York at Buffalo, 1985.

Technical Reports

Geng, X., Gopal, R. D. Ramesh, R. and A. B. Whinston, A. B., “Capacity Provision Networks: An Implementation Framework for Web Cache Trading Hubs” Working paper, Center for Research in Electronic Commerce, University of Texas at Austin, Austin, TX, 2002.

Ramesh, R., “Modeling and Analysis of Distributed Mission Training Systems: Training Effectiveness, Flight Tradeoffs, Costs, Resource Allocations and an Approach to Distributed Training Program Development”, Airforce Office of Scientific Research (AFOSR) final research report, Bolling Airforce base, Washington DC, 2000.

Ramesh, R., “Distributed Mission Training Systems and Technologies: Cost Benefit Models, Analytical Tools and Solutions,” Airforce Research Laboratories/ Raytheon Systems Research Report, Mesa, AZ, 1998.

Ramesh, R., “Client/Server Infrastructure Planning for Air Education Training Management Systems: Models and Design Solutions,” Armstrong Research Laboratory/ University of Dayton Research Institute (UDRI) Research Report, Dayton, OH, 1996.

Braby, R., Charles, J., Sylla, C., Ramesh, R., Willis, R. and Hunter, D., “Instructor Considerations in the Design of Optimal Training Devices,” U.S. Army Research Institute (ARI) Research Report N61339-86-D-0009-0003, Orlando Field Unit, Orlando, FL, 1988.

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Aziz, Y., Guo, Z. and Ramesh, R., "Forward Contract Mechanisms for Optimal Service Sourcing in On-Demand Digital Platforms", Proceedings of the 32nd Annual Workshop on Information Technologies and Systems (WITS 2022), Copenhagen, Denmark, December 2022.

Eftekhari, S. and Ramesh, R., "Spinoff from Health Information Exchanges: Doctor Shopping", Conference on Information Systems & Technology (CIST), Indianapolis, IN, October 2022.

Yaraghi, N., Ramesh, R. and Tayi, G., "Impact of Incentives on Service Providers' Participation in On-Demand Service Platforms: A Micro Randomized Field Trial", Conference on Information Systems & Technology (CIST), Indianapolis, IN, October 2022.

Eftekhari, S. and Ramesh, R., "Evolution of the Physicians' Referral Networks: An Empirical Analysis", POMS Annual Conference, Orlando, FL, April 2022.

Eftekhari, S., Ramesh, R. "Drivers of the Physician's Referral Networks", INFORMS Annual Meeting, Anaheim, CA, October 2021

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, R. ""Consideration Set-induced Utility Choice Model for Physicians' Referral Decisions", Conference on Information Systems & Technology (CIST), National Harbor, MD, November 2020.

Ramesh, R. "Green Data Analytics of Supercomputing from Massive Sensor Networks: Does Workload Distribution Matter?" Keynote Address at the 15th INFORMS Workshop on Data Mining and Decision Analytics, National Harbor, MD, November 7, 2020.

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, R. "Drivers of the Referral Network: How Does HIE Impact Physicians' Decisions?" Conference on Health IT and Analytics (CHITA), Washington, D.C, November 2019.

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, R. "An Empirical Analysis of Physician Referral Networks" INFORMS Healthcare conference, Cambridge, MA, August, 2019.

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, R. "Physician Referral Networks and HIE Platforms: Mutual impact analysis" DSI 2019 – 50th Annual conference of DSI, New Orleans, LA, November 2019.

Ramesh, R. "Availability Analytics in Cloud Computing: Downtime Prediction, SLA Management, and Network Function Virtualization", Keynote Address at the 12th International Conference on Algorithmic Aspects in Information and Management (AAIM), University of Texas at Dallas, Dallas, TX, December 3, 2018.

Eftekhari, S., Yaraghi, N. Gopal, R. Ramesh, R., "Utility Maximization in Physicians' Referral Networks: Model and Methodology ", Proceedings of the Annual Workshop on Information Technologies and Systems (WITS 2018), San Francisco, CA, December 2018.

Eftekhari, S., Yaraghi, N., Gopal, R. Ramesh, R., "A framework of Referral Decision Support System", Annual Conference of the Decision Sciences Institute (DSI), Chicago, IL, November 2018.

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, R. "The Interlinked Effects of Health Information Exchange (HIE) Adoption and Physician Referrals: An Empirical Analysis", Conference on Information Systems & Technology (CIST), Phoenix, AZ, November 2018.

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, R. "A Framework of a Multi-Utility Driven Referral Decision Support System" Conference on Health IT and Analytics (CHITA), Washington, D.C, November 2018.

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, "Designing Incentive-Pricing Mechanisms to Promote Health Information Exchanges – part II" Proceedings of *2018 Americas Conference on Information Systems (AMCIS 2018)*, New Orleans, LA, August 2018.

S. Eftekhari, S., Yaraghi, N. Gopal, R. Ramesh, R., "Designing Incentive-Pricing Mechanisms to Promote Health Information Exchange", Proceedings of the Annual Workshop on Information Technologies and Systems (WITS 2017), Seoul, South Korea, December 2017. **(Received the best research in progress paper award)**

Guo, Z., Li, J., Ramesh, R., "Optimal Resource Provisioning in Virtualized Cloud Data Centers," Proceedings of the Annual Workshop on Information Technologies and Systems (WITS 2017), Seoul, South Korea, December 2017. **(Nominated for the best paper award)**

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, R. "Participation in Health Information Exchanges and Physicians' Referral Patterns: Are they Mutually Reinforcing?" Conference on Health IT and Analytics (CHITA), Washington, D.C, November 2017.

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, R. "Co-evolution of Health Information Exchange Adoption and Physicians' Referral Networks: A Stochastic Actor-Oriented Paradigm", Conference on Information Systems & Technology (CIST), Houston, TX, October 2017.

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, R. "Does Health Information Exchange impact Physicians' Referral Patterns?", Secure Knowledge Management Workshop (SKM), Tampa, FL, October 2017.

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, "The Impact of Health Information Exchanges on Physicians' Centrality in the Referral Network," Proceedings of *2017 Americas Conference on Information Systems (AMCIS 2017)*, Boston, MA, August 2017.

Yaraghi, N., Gopal, R. D. and Ramesh, R., "Drivers and Processes of Patients' Privacy Decisions on Health Information Exchange Platforms", Proceedings of the Annual Workshop on Information Technologies and Systems (WITS), Dublin, Ireland, December 2016.

Eftekhari, S., Yaraghi, N., Singh, R., Gopal, R. D. and Ramesh, " Do Health Information Exchanges Deter Repetition of Medical Services?", Proceedings of the 2016 Workshop on Health Information and Economics (WHITE), Washington, DC, October 2016.

Eftekhari, S., Yaraghi, N., Gopal, R., Ramesh, "Impact of Health Information Exchange adoption on Physicians' Referral Behavior," Proceedings of *2016 Americas Conference on Information Systems (AMCIS 2016)*, San Diego, CA, August 2016.

Yuan, S., Das, S., Ramesh, R. and Qiao, C., "Resource Adjustment and Intervention Scheduling in the Availability-Aware Cloud", Workshop on Information Technologies and Systems (*WITS 2015*), Dallas, TX, December 2015.

Du, A. Y., Das, S., Yang, Z., Qiao, C. and Ramesh, R., "Hierarchical Multi-Domain Architecture in Cloud Datacenters: Predicting Transient Downtime of Client Services", INFORMS Conference on Information Systems and Technology (*CIST 2015*), Philadelphia, PA, November 2015.

Yang, Z., Liu, L., Qiao, C., Das, S., Ramesh, R. and Du, A.Y., "Availability-aware Energy-efficient Virtual Machine Placement", IEEE ICC 2015 - Communications QoS, Reliability and Modeling Symposium (*ICC '15 CQRM*), London, UK, 2015.

Yuan, S., Das, S., Ramesh, R. and Qiao, C., "Resource Allocation and Run-Time Intervention Scheduling in the Availability-Aware Cloud", Workshop on Information Technologies and Systems (*WITS 2014*), Auckland, New Zealand, December 2014.

Ramamoorthy, S. S., Das, S., Ramesh, R. and Annamalai, S., "Intelligent Resource Allocation for Server Virtualization Using Ant Colony Optimization", Workshop on Information Technologies and Systems (*WITS 2014*), Auckland, New Zealand, December 2014.

Yuan, S. Das, S., Du, A. Y., Ramesh, R., Yang, Z. and Qiao, C., "Availability-aware Resource Provisioning, Pricing, and Allocation Adjustment in the Cloud" INFORMS Conference on Information Systems and Technology (*CIST 2014*), San Francisco, CA, November 2014.

Yaraghi, N., West, D. M., Gopal, R. D. and Ramesh, "Drivers and Deterrents of Affordable care Act Enrollment: A State Level Analysis", Proceedings of the 2014 Workshop on Health Information and Economics (WHITE), Washington, DC, October 2014.

Yaraghi, N., Sharman, R., Gopal, R. D. and Ramesh, R., "Disclosure of Medical History on Health Information Exchange Platforms: Rational Drivers, Psychological Cues and Environmental Effects" INFORMS Conference on Information Systems and Technology (*CIST 2014*), San Francisco, CA, November 2014.

Yaraghi, N., Du, A. Y., Sharman, R., Gopal, R. D. and Ramesh, "Health Information Exchange as a Multi-sided Platform: Adoption, Usage and Practice Involvement in Service Co-Production". Proceedings of the 2013 Workshop on Health Information and Economics (WHITE), Washington, DC, November 2013.

Yuan, S. Das, S., Du, A. Y., Ramesh, R. and Qiao, C., "Cloud Resource Provisioning and Contract Adjustment in the Backdrop of SLA Violation Risk Mitigation" INFORMS Conference on Information Systems and Technology (*CIST 2013*), Minneapolis, MN, October 2013.

Yaraghi, N., Du, A. Y., Sharman, R., Gopal, R. D. and Ramesh, R., "Why Do Patients Disclose Their Medical History on Health Information Exchange Platforms?" INFORMS Conference on Information Systems and Technology (*CIST 2013*), Minneapolis, MN, October 2013.

Yaraghi, N., Du, A. Y., Sharman, R., Gopal, R. D. and Ramesh, R., "Modeling Practice Efficiencies due to Healthcare Information Exchanges and Implications for HIE Network Growth." Proceedings of the Annual Workshop on Information Technologies and Systems (*WITS*), Orlando, Florida, December 2012.

Yaraghi, N., Du, A. Y., Sharman, R., Gopal, R. D., Ramesh, R., Singh, R. and Singh, G., 2012. "Professional and Geographical Network Effects on HIE growth". Proceedings of the 2012 Workshop on Health Information and Economics (WHITE), Washington, DC, October 2012.

Du, A. Y., Das, S., Qiao, C., Ramesh, R. and Yang, Z., "Downtime Predictions for Virtual Servers: A Study under Two Check-pointing Scenarios", INFORMS Conference on Information Systems and Technology (CIST 2012), Phoenix, AZ., November 2012.

Yaraghi, N., Du, A. Y., Sharman, R. Gopal, R. D., Ramesh, R., Singh, R. and Singh, G., "Clustering Physicians Based on Professional Proximity Using SAS", Proceedings of the SAS Global Forum 2012 conference, SAS Institute, Inc., Paper 184-2012, April 22-25, 2012; Orlando, Florida.

Yaraghi, N., Du, A. Y., Sharman, R., Gopal, R. D. and Ramesh, R., "Interlinked Network Effects in Healthcare Information Exchange Growth", Workshop on Information Technologies and Systems (WITS), Shanghai, China, December 2011 **(Nominated for the Best paper Award)**

Du, A. Y., Das, S., Jie Hu, Chunming Qiao, Ramesh, R. and Zhouhan Yang, "Reliability in Cloud Computing: Downtime Predictions for Virtual Servers", Workshop on Information Technologies and Systems (WITS), Shanghai, China, December 2011.

Du, A.Y., Das, S. And Ramesh, R., "Pricing Volatile IT Resources in Cloud Computing", INFORMS Conference on Information Systems and Technology (CIST 2010), Austin, Texas, November 2010 **(Nominated For the Best Paper and Best Student Paper Awards)**

Du, A.Y., Das, S., Gopal, R. D. And Ramesh, R., "Data and Revenue Management Using Tiered Storage", Workshop on Information Technologies and Systems (WITS), Phoenix, Arizona, December 2009.

Du, A.Y., Das, S., Gopal, R. D. And Ramesh, R., "Are Options a Better Option? A Study of Risk Hedging In the Storage Grid Market", INFORMS Conference on Information Systems and Technology (CIST 2009), San Diego, California, October, 2009.

Du, A.Y., Das, S., Gopal, R. D. And Ramesh, R., "Resource Pricing and Risk Mitigation for Businesses in Online Storage Grids", INFORMS Conference on Information Systems and Technology (CIST 2008), Washington D.C., October 2008.

Du, A. Y., Li, J.P., Gopal, R. D., Ramesh, R., and Tayi, G. K., "Risk Management in Globally Distributed Call Center Networks – A Real Options Approach" Workshop on Information Technology and Systems (WITS), Milwaukee, WI, December 2006.

Du, A.Y., Gopal, R. D. and Ramesh, R., "Analysis of Risk Management in Capacity Provision Networks (CPN) – A Financial Engineering Approach" International Symposium on Information Systems (ISIS), Indian School of Business (ISB), Hyderabad, India, December 16 – 18, 2006.

Du, A.Y., Gopal, R. D. and Ramesh, R., "Value Chains in IT-Enabled Services: Towards a Reference Model", Conference on Globally Distributed Work (GDW), Indian Institute of Management (IIM), Bangalore, India, December 2005.

Du, A.Y., Geng, X., Gopal, R. D. Ramesh, R. and A. B. Whinston, A. B., "Share Auctions, Pre-Communications and Simulation with Petri-Nets" Workshop on Information Systems Economics (WISE), Irvine, CA, December 2005.

Du, A.Y., Geng, X., Gopal, R. D. Ramesh, R. and A. B. Whinston, A. B., "Analysis of Topographical Leverage-driven Capacity Trading in Internet Storage Infrastructures" Workshop on Information Technology and Systems (WITS), Las Vegas, NV, December 2005. **Nominated for the Best paper Award. Achieved SSRN's Top Ten download lists for "ISN Conferences & Meetings", "ISN Meetings" and "Workshop on Information Technologies & Systems Meetings (WITS)" in 2007.**

- Geng, X., Gopal, R. D. Ramesh, R. and A. B. Whinston, A. B., "Capacity Provision Networks: Foundations of Markets for Internet Storage Infrastructures," *INFORMS Conference on Information Systems and Technology (CIST 2005)*, San Francisco, CA, November 2005.
- Zhang, H., Kishore, R., and Ramesh, R., "Ontological analysis of MibML grammar using the Bunge-Wand-Weber model," *Proceedings of 2004 Americas Conference on Information Systems (AMCIS 2003)*, New York, NY, August 2004.
- Zhang, H., Kishore, R., Sharman, R., and Ramesh, R. "The GRITIKA ontology for modeling e-service applications: formal specification and illustration," *Proceedings of 37th Hawaii International Conference on System Sciences (HICSS-37)*, Big Island, Hawaii, January 2004.
- Zhang, H., Kishore, R., Ramesh, R. and Sharman, R., "The GRITIKA ontology for modeling multiagent-based integrative business information systems," *Proceedings of the 2003 Americas Conference on Information Systems (AMCIS 2003)*, Tampa, FL, August 2003, pp.1885-1891.
Nominated for the Best Paper Award.
- Kishore, R, Ramesh, R. and Sharman, R., "A Tutorial on Computational Ontologies: Foundations, Representations and Methods," in the *Proceedings of the Association of Information Systems (AIS) Conference*, Tampa, FL, August 2003.
- Raghu, T. S., Ramesh, R. and Whinston, A. B., "Addressing the Homeland Security Problem: A Collaborative Decision Making Framework," in the *Proceedings of the First NSF/NIJ Symposium on Intelligence and Security Informatics (ISI 2003)*, Springer-Verlag, 2003.
- Voit, J., Kishore, R., Akella, R. and Ramesh, R., "Triggered learning Process from Production to Product Development", *PICMET'03*, Portland, Oregon, 2003.
- Gopal, R. D., Hariharan, G., Ramesh, R. and Whinston, A. B., "Multi-agent Contracts: Protocols and Design of Mechanisms", in the proceedings of *International Conference on Advances in Infrastructure for Electronic Business, Science, and Education on the Internet, SSGRR 2001* L'Aquila, Italy, Aug, 2001.
- Zhang, H, Kim, D. J. and Ramesh, R., "Ontological Foundations for the Design of Integrated Multiagent Architectures", in the *Proceedings of the Third International Bi-Conference Workshop on Agent-Oriented Information Systems (AOIS-2001), 5th International Conference on Autonomous Agents*, Montreal, Canada, May 28 - June 1, 2001.
- Zhang, H, Kim, D. J. and Ramesh, R., "Multiagent Systems: An Ontological Meta-model", in the *Proceedings of the Association of Information Systems (AIS) Conference*, Boston, MA August 2001.
- Aldakhilallah, K. A. and Ramesh, R., "Cyclic Scheduling in Reentrant Jobshops: Algorithms and Analysis," in the proceedings of *INFORMS & KORMS*, pp. 240 - 249, Seoul, Korea, 2000.
- Ramesh, R. and Andrews, D. H., "Distributed Mission Training: Modeling and Analysis of Training Effectiveness, Costs and Resource Allocations," in the *Proceedings of the Interservice/Industry Training, Simulation and Education Conference (I/ITSEC)*, Orlando, Florida, December 1999.
- Bhattacharjee, S. and Ramesh, R., "An Object oriented Modeling Framework for an Enterprise-wide Distributed Computing System", in the *Proceedings of the Association of Information Systems (AIS) Conference*, Baltimore, MD, August 1998.

Raghu, T.S., Ramesh, R., Chang, A.M. and Whinston, A.B., "Defeasible Arguments in Collaborative Processes: A Connectionist Framework for Assessment", in the *Proceedings of the Association of Information Systems (AIS) Conference*, Baltimore, MD, August 1998.

Bhattacharjee, S. and Ramesh, R., "Client/Server based Enterprise Computing: Research Issues and a Framework for Infrastructure & Resource Planning", in the *Proceedings of the Third INFORMS Conference on Information Systems and Technology*, College on Information Systems, INFORMS Conference, Montreal, 1998.

Chandra, J., Gasser, L, March, S., Mukherjee, S., Pape, W., Ramesh, R., Rao, H. R. and Waddoups, R., "Information Systems Frontiers: Emerging Vistas", in the *Proceedings of the 18th International Conference on Information Systems (ICIS)*, Atlanta, GA, 1997.

Ramesh, R., "Modeling and Analysis of Distributed Mission Training Systems," *Air Force Office of Scientific Research (AFOSR): Research Archives*, 2000.

Ramesh, R., "Aircraft and DMT: Modeling and Analysis of training Effectiveness, Flight Tradeoffs, Costs and Resource Allocations", *Air Force Office of Scientific Research (AFOSR): Research Archives*, 1998.

Ramesh, R., "AETMS: Analysis, Design and Development", *Air Force Office of Scientific Research (AFOSR): Research Archives*, 1994.

Ramesh, R., "A Client-Server Architecture for Aircrew Training Management Systems: A Blueprint for Design and Development", *Air Force Office of Scientific Research (AFOSR): Research Archives*, 1993.

Gopal, R. D. and Ramesh, R., "Multiple Query Optimization," in the *Proceedings of the Annual DSI Conference*, Miami, Florida, 1991.

Gopal, R. D., Ramesh, R. and Zionts, S., "A Methodology for Join Processing in Relational Databases," in the *Proceedings of the Annual DSI Conference*, Miami, Florida, 1991.

Ramesh, R., Karwan, M. H. and Zionts, S., "Interactive Bicriteria Integer Programming: A Performance Analysis," in *Interactive Fuzzy Optimization and Mathematical Programming*, (Eds.) M. Fedrizzi, J. Kacprzyk and M. Roubens, Springer-Verlag, 1991.

Sylla, C. and Ramesh, R., "Modeling Instructor Training Preparation in a Simulation Flight Training Program," in the *Proceedings of the 12th Annual International Conference on Computers and Industrial Engineering*, Vol. 19, Nos. 1-4, 1990.

Ramesh, R. and Cary, J. M., "Multicriteria Jobshop Scheduling," in the *Proceedings of the 11th Annual International Conference on Computers and Industrial Engineering*, Orlando, Florida, 1989.

Ramesh, R., Karwan, M. H. and Zionts, S., "Performance Characteristics of Three Interactive Solution Strategies for Bicriteria Integer Programming," in the *Proceedings of the VIIth International Conference on MCDM*, Manchester, England, 1989.

Shambu, G., Ramesh, R. and Rao, H. R., "A Rule-Based System for Scheduling in a Hybrid Group Technology Environment," in the *Proceedings of the 3rd International Conference on Expert Systems and the Leading Edge in Production and Operations Management*, Hilton Head, South Carolina, 1989.

Ramesh, R. and Sylla, C., "A Decision Support System for Design Optimization of Multiphase Trainer Instructor/Operator Stations in Flight Simulators," in the *Proceedings of the 9th Annual International Conference on Information Systems (ICIS)*, Minneapolis, Minnesota, 1988.

Ramesh, R. and Sylla, C., "Optimal Design of Instructor/Operator Stations in Flight Simulators," in the *Proceedings of the 10th Annual International Conference on Computers and Industrial Engineering*, Dallas, Texas, 1988.

Sylla, C., and Ramesh, R. "A Structural Framework for an Expert Authoring System," in the *Proceedings of the 2nd International Conference on Robotics and Factories of the Future*, San Diego, California, 1987.

Ramesh, R. and Sylla, C., "A Graphic Identification Procedure for an Expert Authoring System," in the *Proceedings of the 9th Annual International Conference on Computers and Industrial Engineering*, Atlanta, Georgia, 1987.

Volonino, L., Chandra Sekar, G. and Ramesh, R., "Decision Quality and Information Load," in the *Proceedings of the 20th Annual Hawaii International Conference on System Sciences (HICSS)*, Honolulu, Hawaii, 1987.

Ramesh, R., Karwan, M. H. and Zionts, S., "An Empirical Assessment and Insights on Two Multicriteria Integer Programming Algorithms," in *Multiple Criteria Decision Making - Towards Interactive and Intelligent Decision Support Systems* (Eds. Y. Sawaragi, K. Inoue and H. Nakayama), Springer-Verlag, 1987.

Ramesh, R., Karwan, M. H. and Zionts, S., "Degeneracy in Efficiency Testing in Bicriteria Integer Programming," in the *Proceedings of the International Workshop on Methodology and Software for Interactive Decision Support*, Albena, Bulgaria, published by the International Institute for Applied Systems Analysis (IIASA), Austria, 1987.

Karwan, M. H., Zionts, S., Villarreal, B. and Ramesh, R., "An improved Interactive Multicriteria Integer Programming Algorithm," in *Decision Making with Multiple Objectives* (Eds. Y.Y. Haimes and V. Chankong), Springer-Verlag, 1985.

Teaching

Taught the following graduate level courses at the School of Management, State University of New York at Buffalo (1984-)

Information Systems

MGS 602: Information Technology and Communication Systems
MGS 607: Information Technology and e-business
MGS 616: DSS: Supply Chains and B2B systems
MGS 655: Distributed Computing
MGS 603: Analytical Methods of Planning and Control
MGQ 603: Computers and Mathematical Models

Management Science

MGQ 605: Mathematical Analysis for Management
MGQ 606: Statistical Foundations of Analytics
MGQ 302: Production and Operations Management

MGQ 602: Regression Analysis and Multivariate Statistics
MGQ 614: Applied Probability Theory
MGQ 611: Deterministic Models of Operations Research
MGQ 616: Stochastic Models of Operations Research
MGQ 618: Statistical Modeling and Simulation with R

Ph.D. Seminars (MGS 695)

Developed and conducted the following doctoral seminar courses:

Reinforcement Learning (developed in 2020)
Statistical Modeling and Data Science (developed in 2019)
Multisided Platforms (developed in 2010)
Design Science in Information Systems (developed in 2007)
Information Management and Systems Control (developed in 1994)
Scheduling Theory (developed in 1993)
Knowledge Engineering and Expert Systems (developed in 1986)
Special Topics in Integer Programming (developed in 1986)
Combinatorial Optimization and Computational Complexity (developed in 1985)

International EMBA Courses

Taught the following courses at the SUNY Buffalo - Renmin University joint EMBA program, Beijing, China (2001 - 2004), SUNY, Buffalo – Motorola University joint EMBA program, Beijing, China (2003 - 2004), SUNY, Buffalo – Singapore Institute of Management (SIM) joint EMBA program, Singapore (2003 - 2014) and Undergraduate program (2005 -)

MGQ 603: Computers and Mathematical Models
MGS 607: Information Technology and e-business
MGQ 301: Probability and statistics

Instructor in *Engineering Economics* and Teaching Assistant in *Introduction to Operations Research*, Department of Industrial Engineering, State University of New York at Buffalo (1981-1984)

Research Supervision

Doctoral Committees

Member of the doctoral dissertation committees of the following students in Management Science & Systems: Yousuf Aziz, Saeede Eftekhari, Shuai Yuan, Niam Yaraghi, Anna Ye Du, Jingguo Wang, Linda Volonino, Jeffrey Teich, Ram Gopal, M. Thirumurthy, Yong Seok Yoon, Kichan Nam, Eleazar Puente, Mark Vroblefski, Khalid Aldakhilallah, Sudip Bhattacharjee and Hong Zhang.

Member of the doctoral dissertation committees of the following students in other departments: Jie Xu (Industrial Engineering), Arindam Bannerjee (Marketing), Gautam Vemuganti (Industrial Engineering), Peiwu Zhao (Industrial Engineering), Lizhi Ma (Industrial Engineering), Muhammad Anwar (Industrial Engineering) and Itiakorit Osele (Electrical and Computer Engineering).

Outside reader of the dissertations at the department of Industrial Engineering: Mannur Reddy, Srinivas Y. Prasad, J. Lin and Carol Romanowski.

Chairman of the doctoral dissertation committees: Yousuf Aziz, Saeede Eftekhari, Shuai Yuan, Niam Yaraghi, Anna Ye Du, Hong Zhang, Sudip Bhattacharjee, Mark Vroblefski, Khalid Aldakhilallah, Ram D. Gopal, M. Thirumurthy.

Chairman of the second year paper research committees: Yousuf Aziz, Saeede Eftekhari, Shuai Yuan, Niam Yaraghi, Anna Ye Du, Girish Shambu, Jeffrey Teich, Joe Sarkis, M. Thirumurthy, Ram D. Gopal, Sudip Bhattacharjee, Khalid Aldakhilallah, Eleazar Puente, Mark Vroblefski and Hong Zhang.

Supervised independent studies of over thirty graduate students.

Masters Committees

Chairman of the Masters Thesis Committees of the following students at the Department of Industrial Engineering: James Cary, Barbara Hartman, Kathleen Brown and Anand Srinivasan.

Chairman of the Masters Thesis Committees of the following students in the MS in MIS program, School of Management: Enrico Reidel and Greg Howland.

Chairman of the Masters Thesis Committee of the following student in the Computer Science Department: Shiva Ramanna.

Professional Services

Invited Session/Conference Chairman/Organizer/Speaker

Best Paper Awards Committee Member, 16th INFORMS Workshop on Data Mining and Decision Analytics, Indianapolis, IN, October 16, 2022.

Best Paper Awards Committee Member, 16th INFORMS Workshop on Data Mining and Decision Analytics, Anaheim, CA, October 24, 2021.

Best Student Paper Awards Committee Member, 16th INFORMS Workshop on Data Mining and Decision Analytics, Anaheim CA, October 24, 2021.

Editors' panel on the topic "Perspectives in publishing Data Science focused papers" INFORMS Annual Conference, Anaheim CA, October 26, 2021.

Best Paper Awards Committee Member, 15th INFORMS Workshop on Data Mining and Decision Analytics, National Harbor, MD, November 7, 2020.

Editors' panel, 15th INFORMS Workshop on Data Mining and Decision Analytics, National Harbor, MD, November 7, 2020.

Editors' panel, INFORMS Annual Conference, National Harbor, MD, November 7, 2020.

Keynote Speaker, 15th INFORMS Workshop on Data Mining and Decision Analytics, National Harbor, MD, November 7, 2020.

Keynote Speaker, 12th International Conference on Algorithmic Aspects in Information and Management (AAIM), University of Texas at Dallas, Dallas, TX, December 3, 2018.

Co-Chair of Minitrack "Technical, Social and Economic Issues in Health Information Exchanges", AMCIS – 2011 - 2014.

Member of the Program Committee of IEEE International Conference on Intelligence and Security Informatics (IEEE ISI), 2005-2019.

Member of the Program Committee of INFORMS Conference on Information Systems and Technology (CIST), 2010-2022.

Member of the Program Committee of Workshop on Information Technology and Systems (WITS), 2004-2022.

Board member, Workshop on Information Technology and Systems (WITS), 2008 -11.

General Co-Chair, Workshop on Information Technology and Systems (WITS), Paris, France, December 13-14, 2008.

Member of the Program Committee of the International Symposium on Information Systems (ISIS) Conference, Indian School of Business (ISB), 2006 - 2012.

Member of the Program Committee of the International Conference on Globally Distributed Work (GDW), Indian Institute of Management, Bangalore, India, 2005-2008.

Member of the Program Committee on the DSS Conference, Indian Institute of Management (IIM), Calcutta, January 2007.

Member of the Program Committee of the Workshop on Electronic Business (WEB), 2004-2012.

Member of the Program Committee of CABIT Security Symposium "Information Security in the Knowledge Economy" Tempe, AZ, 2006.

Co-Chair of the track on 'Ontological Analysis in Systems Analysis and Design," AMCIS, Acapulco, Mexico, August, 2006.

Co-Chair of the track on 'Ontological Analysis in Systems Analysis and Design," AMCIS, Nebraska, Omaha August 2005.

Member of the Program Committee of the CABIT Security Symposium "Information Security in the Knowledge Economy", CABIT'05, Arizona State University, Tempe, AZ, September 8-9, 2005.

Co-Chair of the track on 'Ontology-driven Information Systems," AMCIS, New York City, New York, August 2004.

Co-Chair of the track on 'Ontology-driven Information Systems," AMCIS, Tampa, Florida, August 2003.

Conducted a tutorial on "Computational Ontologies: Foundations, Representations and Methods", AMCIS, Tampa, Florida, August 2003.

Member of the Program Committee of the 2003 Information Resources Management Association (IRMA) International Conference, New Orleans, LA, May 23-26, 2003.

Member of the Program Committee of the 2002 Information Resources Management Association (IRMA) International Conference, Seattle, Washington, May 19-22, 2002.

Invited Plenary Speaker at the conference on "IT and Supply Chain streamlining", China Business Forum and ITNewPower, Shanghai, China (April, 2003).

Invited Speaker, International Conference on *Advances in Infrastructure for Electronic Business, Science, and Education on the Internet*, SSGRR 2001 L'Aquila, Italy, August 2001.

General Chair of the conference entitled *Virtual Enterprises and Pervasive/ Mobile Technologies: An Academia/Industry Workshop on Research Challenges and Frontiers (AIWoRC)*, conducted in cooperation with ACM, IEEE, INFORMS and AIS at SUNY at Buffalo, April 2000.

Organized and chaired a session on "Metaheuristics for location and routing problems," at INFORMS, Montreal, 1998.

Organized and moderated a panel discussion on "Information Systems Frontiers: Emerging Vistas," 18th Annual International Conference on Information Systems (ICIS), Atlanta, Georgia, 1997.

Member, International Program Advisory Committee, 2nd Annual International Conference on Industrial Engineering Applications and Practice, San Diego, California, November 12 - 15, 1997.

Organized and Chaired a session and served as a Panel Discussant in another session at DSI, Miami, Florida, 1991.

Organized and Chaired a one-day workshop on the theme "Variants of the Traveling Salesman Problem" at the Operations Research Colloquium Series, Laval University, Quebec, Canada, 1988.

Speaker at the Meeting of Social Scientists, Indian Society for Individual and Social Development (ISISD), Madras, India. Addressed the topic "Optimization in Social Sciences", 1988.

Speaker at the MBA Student Congregation, Indian Institute of Management, Bangalore, India. Addressed the topic "Opportunities in Operations Research", 1988.

Organized and Chaired a one-day workshop on the theme "Designing Efficient Data Structures: Theory and Implementation" at the Operations Research Colloquium Series, Laval University, Quebec, Canada, 1987.

Organized and Chaired a session on the theme "Multicriteria Optimization" at ORSA/TIMS, St. Louis, 1987.

Organized and Chaired a session on the theme "Multiple Criteria Optimization" at ORSA/TIMS, Los Angeles, 1986.

Organized and Chaired a session on the theme "Interactive Multicriteria Programming" at ESIGMA, Lisbon, Portugal, 1986.

Principal discussant in an analysis and review forum in ESIGMA, Lisbon, Portugal, 1986.

Principal discussant in the program summary and review session at the International Conference on Multi-Attribute Decision Making via O. R. - Based Expert Systems, University of Passau, West Germany, 1986.

Organized and Coordinated a symposium on 'Artificial Intelligence and Expert Systems', for middle-level managers and executives of Western New York industrial community at the State University of New York at Buffalo, 1985.

Organized and Chaired a session on the theme "Data Structures" at ORSA/TIMS, Orlando, Florida, 1983.

Reviewing Activities

Reviewer of articles on a regular basis for following journals:

Management Science, Operations Research, Naval Research Logistics, Networks, IEEE Transactions on Software Engineering, INFORMS Journal on Computing, Information Systems Research, European Journal of Operations Research, IEEE Transactions on Knowledge and Data Engineering, IEEE Transactions on Systems, Man and Cybernetics, Computers and Chemical Engineering, International Journal on Production Economics, SIAM Journal on Control and Optimization, Automatica, Large-Scale Systems, IIE Transactions, Computers & Industrial Engineering, Operations Research Letters, Opsearch, Asia-Pacific Journal of Operational Research, International Journal of Man-Machine Studies, Optimization, Journal of Information Systems Research, Data and Knowledge Engineering, Omega

Reviewer of articles for the Special AI volume of SIGAI of ORSA, and several proceedings.

Book reviewer for PWS-Kent Publishing Company, John Wiley & Sons, Addison-Wesley, Harper Collins and Duxbury Press.

Member of the National Science Foundation SBIR/STTR review panel, September, 2001, September 2002, September 2003.

Regular Proposal Reviewer for the National Science Foundation and the Air Force Office of Scientific Research.

Membership

Institute for Operations Research and Management Science (INFORMS)
Association for Computing Machinery (ACM)
Institute for Electrical and Electronics Engineers (IEEE)
Association for Information Systems (AIS)
European Summer Institute Group on Multicriteria Analysis (ESIGMA)
International Special Interest Group on MCDM

University Service

University Committees

Committee of Associate Deans for Research (2001 - 2006)
University Faculty Senate (1994 - 00)

University Faculty Senate Executive Committee (1996 - 98)

School Committees

Director, MS in Information Systems Program (2001 - 2005)
Chair, Personnel Actions Committee (2001 – 2003)
Member, School Policy Committee (2005 - 2015)
Member, Personnel Actions Committee (2000 – 03, 2016-19)
Member, Research Committee (2000 - 2005)
Member, M.B.A. Program Committee (1991 - 94)
Member, M.B.A. Program Subcommittee on Curr. Development (1991 - 94)
Member, M.B.A. Program Subcommittee on Admissions (1992 - 94)
Member, M.B.A. Program Subcommittee on Core and Options (1993 - 94)
Member, Ph. D. Program Committee (1986 - 91)
Member, Graduate School Committee for Ph.D. programs at the School of Management (1986 - 91)
Member, Computer Planning and Allocations Committee (1986 - 87)
Member, Library Resources Committee (1986 - 87)
Member, CEP207 Course Reorganization Committee (1990)

Department Committees

Member, MIS Curriculum Committee (1992 -)
Member, Organizing Committee for the Conference on World Class Manufacturing (with APICS) (1991)
Coordinator, Ph.D. Programs and Ph.D. Students' Advisement (1986 - 91)
Chairman, Committee for the review of the Ph.D. Programs (1987 - 90)
Chairman, Faculty Search Committee (1990 - 91)
Chairman, Course Upgrade Committee (MGQ 603) (1988 - 89)
Member, Committee on Mgmt. Science graduate curriculum development (1986 - 87)
Member, Committee on MIS undergraduate curriculum development (1986 - 87)
Member, Committee for the development of a decision Support Systems option at the graduate level (1985 - 86)
Coordinator and member of the organizing committee for the symposium on Artificial Intelligence and Expert Systems (1985 - 86)
Course Coordinator for the graduate course MGQ 603 (1985 -1987, 1988 -)

Other Significant Pedagogical Contributions

Substantially upgraded and developed a new MIS curriculum (1997 - 99)

Key member of the core faculty team that designed, developed and delivered three executive IT training programs to executives from the Samsung Corporation. The programs involved an outlay of about \$750,000 (1996-97).

Designed and developed seven doctoral seminars that led to several doctoral dissertations and second year papers.

Was instrumental in initiating, planning and organizing a \$10000 donation of equipment (two NT servers and three SUN workstations) from Mr. Cherif Sleiman.

Designed and developed the dual-degree MS/MBA program at Bangalore, India, in collaboration with MSS faculty, Amrita faculty and HP executives. Established a tripartite agreement between UB, Amrita and HP.

Served as a consultant to New Jersey Institute of Technology (NJIT), Newark, NJ in developing a PhD program in *Data Science* in their business school (2015-17). Played a major role in the program design, development and evaluation process and contributed to the NJIT faculty team that was charged with this mission. The program has been approved by the school, university, NJIT board of trustees and the State of New Jersey, and has been successfully implemented in the fall of 2016.

Served as an International Research Advisor at the “Information Systems Workshop on IT Innovations in the next decade”, City University of Hong Kong, Hon Kong, June 22-24, 2016.