

# SRIDHAR NARASIMHAN

## CURRICULUM VITAE

October 2009

### Present Position

Senior Associate Dean & Chief Operating Officer  
Robert A. Anclien Professor of Information Technology Management  
College of Management  
Georgia Institute of Technology  
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### Education

- Ph.D. Business Administration, The Ohio State University, August 1987.  
Thesis: *Topological Design of Networks for Data Communication Systems*.  
Thesis Advisors: Hasan Pirkul and David A. Schilling.
- M.S. Computers and Information Systems, University of Rochester, 1983.
- M.B.A. Indian Institute of Management, Bangalore, India, 1981.
- B.E. Electrical and Electronics Engineering, (Honors),  
Birla Institute of Technology and Science, Pilani, India, 1977.

### Employment

Robert A. Anclien Professor & Senior Associate Dean, COO; College of Management of Management, Georgia Tech, (with tenure), June 2007 –

Professor; College of Management of Management, Georgia Tech, (with tenure), Fall 2001 –

Associate Professor; College of Management of Management, Georgia Tech, (with tenure), Fall 1993 – Spring 2001

Assistant Professor; College of Management, Georgia Tech, Fall 1987 – Spring 1993

Teaching Associate; Taught at the Computer & Information Science Department,

The Ohio State University from April 1984 to August 1986.  
Taught at the Graduate School of Management, University of Rochester from July 1982 to March 1984.

Systems Officer: DCM Data Products, New Delhi, India. The job involved studying user requirements for data processing applications, preparing sales proposals, installing applications and training of customer personnel for data processing (July 1977 – June 1979).

### **Major Accomplishments - Senior Associate Dean and Chief Operating Officer**

- PhD Program Review Task Force Chair (2007-08).
  - Revamped the PhD Program in the college.
  - Increased stipends for incoming and existing PhD students.
  - Instituted annual reviews of PhD students
  - Developed procedures for better mentoring and monitoring of PhD students
  
- Undergraduate Program Review Task Force Chair (2008-09).
  - The task force studied undergraduate business programs in top B-schools
  - Interviewed GT alumni, current students, and recruiters.
  - Implementing recommendations in 2009-10.
  
- MBA Program.
  - Worked with the College's Graduate Office to launch the evening MBA program in fall 2007.
  - Work closely with the Associate Dean of our graduate program in identifying instructional faculty and finding resources for staff hiring.
  - Georgia Tech obtained approval from the Board of Regents to raise annual in-state MBA tuition to \$22,000 (plus fees) from \$8,938 (plus fees).
  
- Executive Education
  - We have formed an Executive Advisory Panel
  - Restructured the administrative structure in that office
  - Hired staff in sales and operations.
  
- Launched the Trade-Chain Innovation & Productivity (TIP) Center (Costa Rica) (<http://tip.gatech.edu>) in August 2009.

The TIP effort is a partnership that includes the Supply Chain & Logistics Institute, the Stewart School of Industrial and Systems Engineering, and the College of Management in partnership with the Foreign Trade Corporation (PROCOMER) and the Chamber of Industries in Costa Rica. The TIP Center will develop a comprehensive program focused on:

1. developing insights, strategies, and methodologies to improve the productivity of existing trade-chains,
  2. promoting innovation for identifying and enabling new trade-chain opportunities, and
  3. providing education related to trade-chain infrastructure, innovation, and productivity.
- Supported the development of the Technology & Management program. This is a joint undergraduate minor between the Colleges of Management and Engineering.
  - Selected for the 2008-2009 University Leadership Program at Georgia Tech. The purpose of the ULP is to ensure the strength and effectiveness of Georgia Tech's faculty leaders.

#### **Administration - Senior Associate Dean and Chief Operating Officer**

- Provide Dean's office support to the Undergraduate, MBA, Executive MBA, and PhD programs. I work with the respective Associate Deans for their resource needs, staffing, and program development.
- Manage the faculty teaching and research activities in the College
- Conduct annual reviews of 70 tenure-track faculty and 10 faculty members
- Manage the faculty hiring process
- Assist the Reappointment, Promotion and Tenure Committee on promotion & tenure reviews, critical reviews, and post tenure reviews
- Supervise the development of the annual budgets for the various offices in the College
- Helped the Dean develop and implement budget cuts for the College, FY2009 & 2010
- Manage Space Planning
- Deal with Human Resource Issues that come to the Dean's office
- Direct Reports are the CIO and the Director of Communications
- Initiated a Customer Relationship Management System for our Executive Education office in 2008. Currently we are the only college at GT to use a CRM system. Our graduate (MBA) office is transitioning to the CRM system in fall 2009.
- Initiated a Content Management System (CMS) for the College's web site

- Assisting with AACSB maintenance of accreditation (2010-11). Review Team was identified and has been approved by AACSB.
- Assign faculty and staff to the various College and Georgia Tech committees.

**Information Technology Management (ITM) Area.** College of Management, Fall 1988 -.

Area Coordinator. 1988 – 2001. I established the ITM area and served as its first area coordinator.

Recruiting Faculty. Led efforts to identify and recruit new faculty in the ITM area.

Masters Program Level. Developed the Information Technology Management Curriculum for the MBA Program. Currently there is one required core course in ITM and several elective courses. I have advised MBA students about the ITM area and inform them about employment opportunities.

Undergraduate Courses and Certificate in “Information Systems”. Developed the ITM Curriculum for the undergraduate program including a required core course and several electives I have also developed a new *Certificate in Information Technology Management*. This certificate is intended to give undergraduate students a serious treatment of both technical and managerial issues about developing and managing information systems.

Ph.D. Curriculum. I started the Ph.D. Program in Information Technology Management. Program development efforts addressed (a) course and curriculum design of ITM area content, (b) identification of research tools from other campus units, (c) design of program of study. The Ph.D. Program has graduated several students.

**Select College/Institute Committees**

- Chair of Reappointment, Promotion, and Tenure Committee, College of Management, 2003 -07
- Chair, College of Management PhD Program Review Task Force, 2007-08
- Chair, College of Management Undergraduate Program Review Task Force, 2008-09
- Member of the Library Dean Search Committee, 2008
- Member of Provost’s Tenure and Promotion Committee, 2003-07
- Member of Reappointment, Promotion, and Tenure Committee, College of Management, 1995-97, 2001-07
- Chair of Costley Chair Search Committee, 2006-07. We successfully hired Dr. Sandra Slaughter who was at CMU

- Member of the College of Management Dean Search Committee, 2005-06
- Member of the COM Faculty Advisory Board, 2002-07
- Member of the Georgia Tech Study Abroad Committee, 2003-04, 2004-05
- Member of the Institute MS-SSE Sub-Committee on Information and Enterprise Systems, Fall 2005 – Spring 2006
- Member of the Faculty Advisory Board, GT Information Security Center
- Associate Director of the iXL Center for E-Commerce, 2000
- Member, Management of Technology Task Force, 1989 – 1991

I have served on various elected and appointed committees at the college and institute levels (I can provide details if needed)

### **Outreach Activities**

- For the Information Technology Management Program (ITMP) the Partner Organizations included:
  - AFLAC
  - InterContinental Hotels
  - Bell South Information Systems
  - Bell South Telecommunications
  - Cabletron
  - Centers for Disease Control
  - Chick-Fil-A
  - Coca Cola
  - Coca Cola Enterprises,
  - Equifax
  - Federal Reserve Bank of Atlanta
  - Forces Command/Fort McPherson
  - GSA
  - Gulfstream Aerospace
  - HBO & Company
  - John B. Harland & Co.
  - Milliken
  - National Data Corporation
  - Office of Information Technology (Georgia Tech)
  - Southern Company
  - SCANA Energy
  - SunTrust Bank
  - Turner Broadcasting
- For the MBA IT Practicum Course I have obtained projects from the CIOs of the following organizations:
  - Coca Cola
  - Coca Cola Enterprises
  - CheckFree
  - InterContinental Hotels
  - SecureWorks
  - Southern Company
  - Home Depot
  - TravelPort
  - Microsoft
  - EarthLink
  - Dekalb Medical Center
  - Scientific Atlanta
  - Matria Health Care

## **Professional Service**

### **Editorial Work for Journals**

- Member of the Editorial Review Board of *IEEE Transactions on Engineering Management*, 2004 -.
- Associate Editor, *Electronic Commerce Research* (2001 -)
- Associate Editor, *Electronic Commerce Research and Applications* (2001 -)
- Member of the Editorial Review Board of *Information Technology and Management*. (1997 -)
- Guest Editor, *Journal of Organizational Computing and Electronic Commerce*, Special Issue on Telework, Vol. 6, No. 4, 1996.
- Edited a Special Issue of *Information Technology & Management*, Selected papers from WITS'99, Vol. 3, No. 4, 2002.
- Guest Editor, *Information Technology & Management*, 2006. Selected Papers from CIST'03.
- Member of the Editorial Review Board of the *Journal of Microcomputer Systems Management*. (1988-91)

### **Reviewer Work for Journals and Conferences**

- *Academy of Management Executive*
- *Annals of Operations Research*
- *Computer Networks and ISDN Systems*
- *Electronic Commerce Research*
- *European Journal of Operational Research*
- *ICIS – International Conference on Information Systems*
- *IEEE Journal on Selected Areas in Communications*
- *IEEE Transactions on Communications*
- *IEEE Transactions on Engineering Management*
- *ACM/IEEE Transactions on Networking*
- *IEEE Transactions on Systems, Man, and Cybernetics*
- *IEEE Computer*
- *INFOR - The International Conference on Information Systems*
- *INFOCOM - International Conference on Distributed Systems*

- *Information Technology and Management*
- *INFORMS Journal on Computing*
- *Journal of Information Technology and Management*
- *Journal of Management Information Systems*
- *Journal of Organizational Computing and Electronic Commerce*
- *Management Science*
- *Naval Research Logistics*
- *Operations Research*
- *Telecommunications Systems*
- *WITS – Workshop on Information Technology and Systems*
- *Reviewer for the second JFIG (Junior Faculty at INFORMS Forum) paper competition 2004*
- *Reviewer for the third JFIG (Junior Faculty at INFORMS Forum) paper competition 2005*
- Reviewed proposals for the National Science Foundation (NSF).

### **Program Chair**

- Program Co-Chair for the Workshop on Information Technology and Systems (WITS'99), Charlotte, NC, Dec. 1999.
- Program Co-Chair, INFORMS Conference on Information Systems & Technology, Atlanta (October 2003)

### **Invited Session Chairperson/Organizer, Program Committees**

- “Telecommunication Networks Design Problems,” *ORSA/TIMS Joint National Meeting*, Denver, October 1988.
- “Advances in Modeling Computer Network Design,” *TIMS/ORSA Joint National Meeting*, Vancouver, May 1989.
- “Methods for Designing and Analysis of Computer Networks,” *ORSA/TIMS Joint National Meeting*, New York, October 1989.
- “Design of Computer Networks,” *ORSA SIG in Telecommunications Conference*, Boca Raton, March 1990.
- Cluster Chair of the ORSA Telecommunications Technical Section for the *ORSA/TIMS Joint National Meeting*, San Francisco, October 1992.

- Cluster Chair of the ORSA Telecommunications Technical Section for the *ORSA/TIMS Joint National Meeting*, Phoenix, November 1993.
- Minitrack Coordinator (with K. Higa), “Telework: The Borderless Organization,” Hawaii International Conference on System Sciences -28, (HICSS-28), Maui, Hawaii, January 3-6, 1995.
- Member of the Program Committee for the Workshop on Information Technology and Systems (WITS), Amsterdam, Dec. 1995.
- Member of the Program Committee for the Workshop on Information Technology and Systems (WITS), Cleveland, Dec. 1996.
- Member of the Program Committee for the INFORMS Conference on Information Systems and Technology and Systems (ICIST), Washington D.C., May 1996.
- Member of the Program Committee for the INFORMS Conference on Information Systems and Technology and Systems (ICIST), San Diego, CA, May 1997.
- Industry Liaison and Member of the Program Committee for the Workshop on Information Technology and Systems (WITS), Atlanta, Dec. 1997.
- Member of the Program Committee for the INFORMS Conference on Information Systems and Technology and Systems (ICIST), Montreal, Canada, April 1998.
- Member of the Program Committee for the International Conference on Electronic Commerce (ICEC), Seoul, S. Korea, April 1998.
- Member of the Program Committee for the Workshop on Information Technology and Systems (WITS), Helsinki, Dec. 1998
- Member of Panel, Georgia Tech-Graham Windsor Group Seminar on “Knowledge Based Organizations,” May 1996.
- Member of Panel, Georgia Tech-Graham Windsor Group Seminar on “How Knowledge Organizations Use Information Technology to Win Customers,” November 1996.
- Member of Panel, Georgia Technology Month, November 1996.

- Member of the Program Committee, International Conference on Information Systems, 1997 – 2001
- Program Co-Chair for the Workshop on Information Technology and Systems (WITS'99), Charlotte, NC, Dec. 1999
- Member of the Program Committee, Workshop on Information Technology and Systems, 1995 – 2003.
- Member of the Program Committee, Workshop on Advanced Issues of E-Commerce and Web-based Information Systems, 2001 –
- Founding Member of the International Conference on Electronic Commerce (ICEC), 1998 – present
- Member of the Program committee - INFORMS Conference on Information Systems & Technology, San Jose (November, 2002)
- Member of the Program Committee, 7<sup>th</sup> INFORMS Telecommunications Conference, Boca Raton, March 2004.
- Member of the Program Committee, International Conference on Information Systems, 2004.
- Member of the Program committee - INFORMS Conference on Information Systems & Technology, San Francisco (November, 2005)
- Member of the Program Committee, Workshop on Information Technology and Systems, 2005.
- Member of the Program Committee, Manufacturing & Service Operations Management (MSOM) Conference, July 2006
- Member of the Program Committee, Third Workshop on E-Business (WEB), December 2004
- Member of the Program Committee, Fourth Workshop on E-Business (WEB), December 2005
- Member of the Program Committee, Fifth Workshop on E-Business (WEB), December 2006
- Member of the Program Committee, Workshop on Information Technology and Systems, 2006.

- Served on National Science Foundation Review Panels, 2007, 2008.
- Member of the Program Committee, Workshop on Information Technology and Systems, 2007.
- Member of the Program Committee, Workshop on Information Technology and Systems, 2008
- Member of the Program Committee, International Conference on Information Systems, 2009.
- Member of the Program Committee, Workshop on Information Technology and Systems, 2009

### **Grants, Sponsored Research, & Other Fund Raising**

- \* **Information Technology Management Partnership**  
Executive Education Program (developed with S. Mitra)  
Total Revenues: \$1,500,000, Fall 1997 – Spring 2003, Fall 2006
- \* **Information Technology Practicum (MBA Course)**  
Obtain Sponsorship from Organizations for Projects (\$9,000)
- \* **SAP America**  
New Techniques to Justify IT Investments/Teaching Enterprise Integration Systems  
Joint Proposal with S. Mitra and S. Ghosh  
Amount Requested: \$100,000.00 (December 1997)  
Result: Funded: \$75,000.00 (January 1998)
- \* **iXL Center for Electronic Commerce**  
Established a Center for Electronic Commerce at Georgia Tech  
Joint Effort with A. Datta, F. Riggins, F. Allvine  
Result: Funding Obtained -- \$600,000 over a 3-year period (1999-2002)
- \* **Electronic Commerce Lab**  
HP Instructional Equipment Grant Application  
Joint Proposal with A. Datta and F. Riggins  
Amount Requested: \$337,182, January 2000  
Result: Funded: \$337,182, March 2000

- \* **Workshop on Information Technology and Systems (WITS-97)**  
Atlanta, GA, Dec. 1997  
Corporate Sponsorship for WITS-97  
Amount Funded: \$5,000.00  
(from Equifax, HBO & Company, Scientific Atlanta)
  
- \* **Enterprise Integration Lab**  
HP Instructional Equipment Grant Application  
Joint Proposal with S. Mitra and S. Ghosh  
Amount Requested: \$184,201.00, September 1997  
Result: Funded: \$118,000.00, December 1997
  
- \* **Richard Speer Computer Grant**  
Chaired a Committee which sent a Proposal to Mr. Richard Speer to improve the Graduate and Undergraduate Computing Environment of the School of Management, Spring 1996  
Result: Funded: \$40,000
  
- \* **Information Technology and Entrepreneurship**  
DuPree Center for Entrepreneurship -- Course Development Grant  
Joint Proposal with H.S. Rhee and B. Toney  
Amount Requested: \$9,000, February 1996  
Result: Funded (7/96-9/96)
  
- \* **Smart Card Applications in Warehousing and Distribution Systems**  
Joint Proposal with C. Zhou (co-Principal Investigators)  
Material Handling Research Center/Georgia Tech  
Amount Requested: \$150,000, May 1994  
Result: Funded: \$125,000 (9/94 - 8/95)
  
- \* **An Engineering Approach to the Design of Business Processes**  
Seed Money for Interdisciplinary Project Proposal – Georgia Tech  
Joint Proposal with G. Tjaden (co-Principal Investigators)  
Amount Requested: \$19,651.00, June 1995  
Result: Funded (8/95 - 6/96)
  
- \* **A Decision Support System for Smart Card Based Manufacturing**  
Joint Proposal with C. Zhou and E. Malstrom (co-Principal Investigators)  
Material Handling Research Center/Georgia Tech  
Amount Requested: \$150,000, May 1993  
Result: Funded: \$125,000 (9/93 - 8/94)
  
- \* **A Study of the Impact of Telecommuting on firms in the Atlanta Area Phase I**

- Joint Proposal with H. Rhee  
 Georgia Department of Natural Resources  
 Amount Requested; \$17,517 Nov. 1993  
 Result: Funded (1/94 - 7/94)
- \* **Smart Card Based Manufacturing System**  
 Joint Proposal with S. Manivannan and C. Zhou (co-Principal Investigators)  
 Material Handling Research Center/Georgia Tech  
 Amount Requested: \$113,250, May 1992  
 Result: Funded \$91,327 (9/92 – 8/93)
- \* **Knowledge Based Task Assignment in a Smart Card Based Manufacturing Cell**  
 Joint Proposal with S. Manivannan and C. Zhou (co-Principal Investigators)  
 CIMS: Georgia Tech  
 Amount Requested: One Graduate Student Support, May 1991  
 Result: Funded (9/91 – 8/92)
- \* **Distributed computer-supported teamwork**  
 Joint Proposal with Charles K. Parsons (co-Principal Investigator)  
 U.S. Army/AIRMICS  
 Amount Requested: \$113,641, July 1989  
 Result: Funded \$113,641 (7/17/1989 – 10/27/1989)

### Current Research Interests

- (i) IT Infrastructure Design
- (ii) Information Systems Outsourcing
- (iii) Electronic Commerce
- (iv) Process and Performance in Government Procurement
- (v) Measuring the Value of Customs Automation: The Case of Costa Rica

### Refereed Journal Publications

- H. Pirkul and S. Narasimhan, “Efficient Algorithms for the Multiconstraint General Knapsack Problem,” *IIE Transactions*, Vol. 18, no. 2, pp. 195-203, 1986.
- H. Pirkul, S. Narasimhan, and P. De, “Firm Expansion through Franchising: A Model and Solution Procedures,” *Decision Sciences*, Vol. 18, no. 4, pp. 631-645, 1987.

- N. Hall, S. Ghosh, R. Kankey, S. Narasimhan, and W. Rhee “Bin Packing Problems in One Dimension: Heuristic Solutions and Confidence Intervals,” *Computers and Operations Research*, Vol. 15, no. 2, pp. 171-177, 1988.
- H. Pirkul, S. Narasimhan, and P. De, “Locating Concentrators for Primary and Secondary Coverage in a Computer Communications Network,” *IEEE Transactions on Communications*, Vol. 36, no. 4, pp. 450-458, 1988.
- S. Narasimhan, H. Pirkul, and P. De, “Route Selection in Backbone Data Communication Networks,” *Computer Networks and ISDN Systems*, Vol. 15, pp. 121-133, 1988.
- S. Agnihotri, S. Narasimhan, and H. Pirkul “An Assignment Problem with Queuing Costs,” *Naval Research Logistics*, Vol. 37, no. 2, pp. 231-244, April 1990.
- S. Narasimhan, “The Concentrator Location Problem with Variable Coverage,” *Computer Networks and ISDN Systems*, Vol. 19, pp. 1-10, 1990.
- S. Narasimhan and H. Pirkul, “The Hierarchical Concentrator Location Problem,” *Computer Communications*, Vol. 15, no. 3, pp. 185-191, April 1992.
- S. Narasimhan, H. Pirkul, and D. Schilling, “Capacitated Emergency Facility Siting with Multiple Levels of Backup,” (with H. Pirkul and D. Schilling), *Annals of Operations Research*, Vol. 40, pp. 323-337, 1992.
- H. Pirkul and S. Narasimhan, “Primary and Secondary Route Selection in Backbone Networks,” *ORSA Journal on Computing*, Vol. 6, no. 1, pp. 50 -60, 1994.
- L.J. LeBlanc and S. Narasimhan, “Topological Expansion of Metropolitan Area Networks,” *Computer Networks and ISDN Systems*, Vol. 26, pp. 1235-1248, 1994.
- “Locating Concentrators in a Computer Network with Multiple Coverage for Terminals,” *Computer Communications*, Vol. 17, no. 2, pp.94-102, February 1994.
- S. Ram and S. Narasimhan, “Database Allocation in a Distributed Environment - incorporating a Concurrency Control Mechanism and Queuing Costs, *Management Science*, Vol. 40, no. 8, pp. 969-983, August 1994.
- S. Ram and S. Narasimhan, “Incorporating the Majority Consensus Concurrency Control Mechanism into the Database Allocation Problem,” *ORSA Journal on Computing* Vol. 7, no. 3, pp. 244-256, Summer 1995.

- M.E.W. Fritz, K. Higa, and S. Narasimhan, "Toward a Telework Taxonomy and Test for Suitability: A Synthesis of the Literature," *Group Decision and Negotiation*, Vol. 4, pp. 311-334, 1995.
- S. Ram and S. Narasimhan, "Database Allocation in Distributed Databases, Incorporating the Central Node Concurrency Control Mechanism," *Journal of Database Management* (accepted).
- M. A. Smith, S. Mitra, and S. Narasimhan, "Offshore Outsourcing of Software Development and Maintenance: A Framework for Research, *Information and Management*, Vol. 31, pp. 165-175. 1996.
- M. E. W. Fritz, S. Narasimhan, and H. Rhee "Communication and Coordination in the Virtual Office," *Journal of Management Information Systems*, Vol. 14, No. 4, pp. 7 – 28. Spring 1998
- M. A. Smith, S. Mitra, and S. Narasimhan, "Information Systems Outsourcing: A Study of Pre-Event Firm Characteristics," *Journal of Management Information Systems*, Vol. 15, No. 2, 61 – 93, Fall 1998.
- M. E. W. Manheim, S. Piramuthu, and S. Narasimhan, "Exploratory Analysis of Factors Influencing Performance Dynamics of Telecommuters and Traditional Office Workers," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 30, No 2, Part C, pp. 239-251, May 2000.
- A. Celik, A. Datta, and S. Narasimhan, "Secure Data Delivery Protocols for Information Commerce in a Push-based Environment," *IEEE Transactions on Systems, Man and Cybernetics* July 2000, Volume 30, Number 04, Part A, pp 433-445.
- L.J. LeBlanc, S. Narasimhan, and B. Ran, "Planning Models for Wide-Area Communication Network Design with Response-Time-Dependent Offered Traffic," *Information Technology & Management Journal*, July 2002, Vol. 3, No 3, pp 229-245
- S. Soni, S. Narasimhan, and L. J. LeBlanc, "Telecommunication Access Network Design with Reliability Constraints," *IEEE Transactions on Reliability*, v 53, n 4, Dec. 2004, pp 532-41.
- J. Son, S. Narasimhan, and F. Riggins, "Effects of EDI-Specific Relational Factors and Channel Climate on EDI Usage in the Customer-Supplier Relationship," *Journal of Management Information Systems*, Vol. 22, No 1, Summer 2005, pp 321-351.
- J. Son, N. Kim, F. Riggins, and S. Narasimhan, "Understanding the development of IOS-based trading partner relationships," *Journal of Organizational Computing & Electronic*

*Commerce*, (to appear).

- R. Dai, S. Narasimhan, D. J. Wu, “Buyer's Efficient E-Sourcing Structure: Centralize or Decentralize,” *Journal of Management Information Systems*, Vol. 22, No 2, Fall 2005.
- S. Kim, N. Malhotra, S. Narasimhan, “Conscious Behavior and Automaticity in Web-based IS Use: An Integrated Goal-Action Model (IGAM),” *Information Systems Research* Vol. 16, No 4, December 2005.
- S. Narasimhan, S. Soni, and S. H. Song, “ATM Network Design for Corporate Networks,” *European Journal of Operations Research*, Volume 170, Issue 2, 16 April 2006, Pages 644-663.
- K. Dutta, S. Soni, S. Narasimhan, and A. Datta, “Optimization in Object Caching,” *INFORMS Journal on Computing*, Vol. 18, No. 2, Spring 2006, pp 243-254.

#### **Submitted Papers Under Review**

- Z. Qu, S. Ransbotham, and S. Narasimhan, “Procurement Contracting Strategy in a Hierarchical Supply Distribution Network,” submitted to *Production and Operations Management*, May 2007
- S. Ransbotham, I. Murthy, S. Mitra, and S. Narasimhan, “Sequential Grid Computing: Models and Computational Experiments,” submitted to *INFORMS Journal on Computing*, June 2007, resubmitted July 2008.
- Z. Qu and S. Narasimhan, “Design strategies in market with open source competitor,” October 2009, submitted to *Marketing Science*.

#### **Refereed Conference Proceedings**

- “PSROUTE: An Interactive Design Tool for Selecting Routes in Data Communication Networks,” (with H. Pirkul), *Proceedings of the Eighth Annual International Conference on Information Systems*, Pittsburgh, December 1987, pp. 264-276.
- “The Hierarchical Concentrator Location Problem,” (with H. Pirkul), *1st ORSA SIG in Telecommunications Conference*, Boca Raton, March 1990.
- “Allocation of Databases in Distributed Database Systems,” (with S. Ram), *Proceedings of the Eleventh Annual International Conference on Information Systems*, Copenhagen, December 1990, pp. 215-230.

- “Metropolitan Area Network Design,” (with L.J. LeBlanc), *2nd ORSA SIG in Telecommunications Conference*, Boca Raton, March 1992.
- “Design of a Smart Card-Based Manufacturing System,” (with S. Manivannan, C. Zhou, and S. Bullington), *1992 Winter Simulation Conference*, Washington, D.C., December 1992.
- “File Allocation on Interconnected LANs,” (with J. Park), *1st Telecommunications Systems Conference*, Nashville, February/March 1993.
- “Telework: Exploring the Borderless Office,” (with M.E.W. Fritz and K. Higa), *Proceedings of the Twenty-Seventh Annual Hawaii International Conference on System Sciences (HICSS)*, Maui, Hawaii, January 1994, Vol. 4, pp. 149-158.
- “Network Design with Topology-Dependent Subscriber Demand,” (with L.J. LeBlanc), *2nd Telecommunications Systems Conference*, Nashville, March 1994.
- “A Model for Designing ATM Networks,” (with S. Mitra), *3rd INFORMS SIG in Telecommunications Conference*, Boca Raton, March 1995.
- “The Impact of Telecommuting on Informal Organizational Communication,” (with M. E. W. Fritz and H. Rhee), *Telecommuting '96*, Jacksonville, Florida, April 25-26, 1996.
- “Structural Effectiveness Metrics for Business Processes,” (with G. S. Tjaden and S. Mitra) *Proceedings of the INFORMS Conference on Information Systems and Technology*, May 5-8, 1996, Washington, DC, pp. 396-400.
- “Routing in Wide-Area Communication Networks with Response-Time-Dependent Offered Traffic,” (with L.J. LeBlanc and Bin Ran), *5th International Conference on Telecommunication Systems*, Nashville, March 1997.
- “Factors Affecting the Extent of Electronic Cooperation between Firms: Economic and Sociological Perspectives,” (with J. Son and F. Riggins), *Twentieth Annual International Conference on Information Systems (ICIS)*, Charlotte, December 1999.
- “ATM Network Design for Client-Server Architectures,” (with S. Soni, and S. H. Song), *9<sup>th</sup> International Conference on Telecommunication Systems*, Dallas, Texas, March 2001, pp. 174 - 185.
- “Optimization approaches for accelerating dynamic content in E-business,” (with K. Dutta, H. Thomas, A. Datta, and S. Soni) *2001 IEEE International Conference on Systems, Man and Cybernetics. e-Systems and e-Man for Cybernetics in Cyberspace*

(Cat.No.01CH37236), 2001, pt. 5, p 3032 vol.5.

- “Optimal Capacity Expansion of Next-Generation Wireless Base Station Subsystems,” (with R.C. Basole and S. Soni), Eighth Annual Informs Conference on Information Systems and Technology, October 2003, Atlanta, Georgia.
- “Two-Layered Location Registration and Paging Areas Partitioning Problem in Mobile Communication Networks,” (with C. H. Paik and S.Soni), 7<sup>th</sup> *INFORMS Telecommunications Conference*, Boca Raton, March 2004.
- “Internet Auction Equilibrium Selection: Theory, Evidence, and Impact of Strategic Bidding Behavior,” (with F. Zhong, D.J. Wu, and H. Zhang), *Workshop on Information Systems & Economics WISE 2004*, Washington, DC, December 2004.
- “E-Sourcing: Buyer's Efficient Structure for Purchasing Preparation Process”, (with R. Dai and D.J. Wu), *Hawaii International Conference on System Sciences, HICSS-38*, January 2005.
- Z. Qu, S. Narasimhan, D.J. Wu, “An empirical model of advance purchasing pattern for perishable goods,” *2007 INFORMS Marketing Science Conference*, Singapore, July 2007.
- Ransbotham S., Murthy I., Mitra S., Narasimhan S., “Models for Sequential Grid Computing,” *Proceedings of the First China Summer Workshop on Information Management*, Shanghai, China, July 22-23rd, 2007

### **Work in Progress**

- Z. Qu and S. Narasimhan, “Software design strategies in market with open source competitor”
- Z. Qu, S. Narasimhan, and D. J. Wu, "Online advance selling, supply contracting and Internet intermediaries - optimal distribution strategies in the hotel industry"
- K. Dutta, S. Narasimhan, and I. Murthy, “A Model for Assigning HR (Human Resources) Personnel to IT Projects”
- Doe-Hyun (Tiger) Song, N. Lurie, S. Narasimhan, “Decision Making in Small Screen Environments”
- G. Retana, D.J. Wu, S. Narasimhan, “Cloud Computing”

- Process and Performance in Government Procurement (with S. Slaughter and C. Forman)
- Measuring the Value of Customs Automation: The Case of Costa Rica (with S. Slaughter and C. Forman)

### **Conference Presentations**

- “Route Selection in Backbone Data Communication Networks,” (with H. Pirkul and P. De), *ORSA/TIMS Joint National Meeting*, Miami, October 1986.
- “A New Algorithm for the Design of Backbone Networks,” (with H. Pirkul), *TIMS/ORSA Joint National Meeting*, New Orleans, May 1987.
- “Selecting Primary and Secondary Routes in Computer Networks,” (with H. Pirkul), *TIMS/ORSA Joint National Meeting*, New Orleans, May 1987.
- “Concentrator Location with Primary and Secondary Coverage,” (with H. Pirkul and P. De), *ORSA/TIMS Joint National Meeting*, St. Louis, October 1987.
- “An Assignment Problem with Queueing Costs,” (with S. Agnihotri and H. Pirkul), *ORSA/TIMS Joint National Meeting*, St. Louis, October 1987.
- “Routing in Computer Networks with Reliability Considerations,” (with H. Pirkul), *TIMS/ORSA Joint National Meeting*, Washington, D.C., April 1988.
- “An Optimal Solution Procedure for a Nonlinear Knapsack Problem,” *TIMS/ORSA Joint National Meeting*, Washington, D.C., April 1988.
- “Capacity Assignment and Route Selection in Backbone Networks,” *TIMS/ORSA Joint National Meeting*, Washington, D.C., April 1988.
- “Hierarchical Concentrator Location,” *ORSA/TIMS Joint National Meeting*, Denver, October 1988.
- “Concentrator Location with Multiple Coverage,” *ORSA/TIMS Joint National Meeting*, Denver, October 1988.
- “Designing Communication Networks with Reliability Considerations,” *TIMS/ORSA Joint National Meeting*, Vancouver, May 1989.

- “Concentrator Location with Variable Coverage,” *ORSA/TIMS Joint National Meeting*, Philadelphia, October 1990.
- “Metropolitan Area Network Design,” (with L.J. LeBlanc), *ORSA/TIMS Joint National Meeting*, Anaheim, October 1991.
- “Allocating Databases to Improve Availability,” (with H. Pirkul), *ORSA/TIMS Joint National Meeting*, San Francisco, November 1992.
- “Optimal Allocation of Files and File Servers on an Extended LAN,” (with J. S. Park), *TIMS/ORSA Joint National Meeting*, Chicago, May 1993.
- “Optimal Configuration of Client/Server Database Systems on Extended LANs,” (with J. S. Park), *ORSA/TIMS Joint National Meeting*, Phoenix, November 1993.
- “Model Management for Logistics Management,” (with S. Mitra), *ORSA/TIMS Joint National Meeting*, Detroit, November 1994.
- “Designing Private Packet Switched Networks with Time Varying Traffic,” (with S. Mitra), *ORSA/TIMS Joint National Meeting*, Detroit, November 1994.
- “Routing in Backbone Networks with Response-Time-Dependent Offered Traffic,” (with L. J. LeBlanc and B. Ran), *INFORMS Joint National Meeting*, Los Angeles, April 1995.
- “Routing in Wide Area Networks with Response-Time-Dependent Offered Traffic,” (with updated model) (with L. J. LeBlanc and B. Ran), *INFORMS Joint National Meeting*, San Diego, May 1997.
- “Routing in Backbone Networks with Response Time Dependent Offered Traffic,” (with new computational results) (with L.J. LeBlanc and B. Ran), *INFORMS Joint National Meeting*, Salt Lake City, May 2000.
- S. Narasimhan, S. Soni, S. Song, “ATM Network Design for Client Server Architectures,” presented at International Telecommunications Conference, March 2001, Dallas, TX.
- S. Soni, S. Narasimhan, L. LeBlanc, “Telecommunication Access Networks Design,” *INFORMS Joint National Meeting*, Miami, FL, November 2001.
- K. Dutta, S. Soni, S. Narasimhan, H. Thomas, and Anindya Datta, “Optimization approaches for accelerating dynamic content in E-Business,” *International Federation of Operations Research Societies (IFORS) 2002*, Edinburgh, July 2002.

- R. C. Basole, S. Soni, S. Narasimhan, “Optimal Capacity Expansion of Next-Generation Wireless Base Station Subsystems,” Eighth Annual INFORMS Conference on Information Systems and Technology, October 2003, Atlanta, Georgia.
- “Two-Layered Location Registration and Paging Areas Partitioning Problem in Mobile Communication Networks,” (with C. H. Paik and S.Soni), 7th INFORMS Telecommunications Conference, Boca Raton, March 2004.
- “Internet Auction Equilibrium Selection: Theory, Evidence, and Impact of Strategic Bidding Behavior,” (with F. Zhong, D.J. Wu, and H. Zhang), Workshop on Information Systems & Economics (WISE) 2004, Washington, DC, December 2004.
- “E-Sourcing: Buyer's Efficient Structure for Purchasing Preparation Process”, (with R. Dai and D.J. Wu), Hawaii International Conference on System Sciences, HICSS-38, January 2005.
- S. Soni, I. Murthy, and S. Narasimhan, “A dual Ascent Procedure for the Design of Virtual Private Networks,” Operations Research Society of India Annual Meeting, Bangalore, India, December 2005.
- S. Narasimhan, I. Murthy, S. Ransbotham, S. Mitra, “Sequential Grid Computing,” *INFORMS Annual Meeting 2007*, Seattle, Washington, November 2007.
- Z. Qu and S. Narasimhan, “Software Design Strategies in Markets with Open Source Competitors,” *INFORMS Annual Meeting 2008*, Washington, DC, October 2008.
- S. Narasimhan, I. Murthy, S. Ransbotham, S. Mitra, “Models for Sequential Grid Computing,” *INFORMS Annual Meeting 2008*, Washington, DC, October 2008.
- I. Murthy, K. Dutta, and S. Narasimhan, “Management of Human Resources for Software Development Projects with Soft Deadlines,” *INFORMS Annual Meeting 2008*, Washington, DC, October 2008
- I. Murthy, K. Dutta, and S. Narasimhan, “Valid Inequalities for an Integer Programming Model for Software Projects with Soft Deadlines,” *INFORMS Annual Meeting 2009*, San Diego, CA, October 2009

## **Teaching Contributions**

### **Courses Developed at Georgia Tech**

#### **i) Graduate**

- MGT 6050 *Management Information Systems (Revised)*. Core required course in Information Technology Management for the Master of Science in Management (M.S.M.) Program in the College of Management.
- Focuses on computer-based information systems and their applications to support management decisions. The emphasis is on the critical role Information Systems play in all areas of organizations. Strategic uses of Information Technology are discussed.
- MGT 6051 *Introduction to Database Management Systems (New)*. An elective course for students majoring in ITM.
- This course is an introduction to data base management systems with emphasis on design principles, implementation issues, data base administration, and organizational implications.
- MGT 6053 *Data Communications for Management. (New)*. An elective course for students majoring in ITM.
- An introduction to data communications for management students. Concepts of network design, management, and security are introduced.
- MGT 6054 *International Issues in Information Technology Management (New)*. An elective course for students majoring in ITM.
- An introduction to International Information Technology Issues. We focus on issues in Developed, Developing and Under-developed countries. Topics include Technology Transfer, Adoption and Diffusion, Overseas Software Development, Multinational Challenges for CIOs, and Issues for the Multinational Organization.
- MGT 6055 *Decision Support and Expert Systems (previously Management Applications of Artificial Intelligence) (New)*. An elective course for students majoring in ITM.
- A study of artificial intelligence methods and systems in management, with emphasis on the use of knowledge-based methods. Topics include knowledge acquisition, knowledge structuring, knowledge representation, maintenance, and business applications.
- MOT 6107 *Technology Strategies in Information Management (New) (with S. Mitra)*. An elective course for students in the Executive Masters in Management of Technology program.

An introduction to Information Technologies.

IMBA 6061 *Information Systems for Management* (New) (with S. Mitra). An elective course for students in the GEMBA program.

An introduction to Information Systems.

MGT 6057 *Business Process Analysis and Design*. (New) (with S.Mitra) A new elective course for students majoring in ITM.

An introduction to the area of Business Process Engineering. Topics covered include the motivation for designing or reengineering business processes, analyzing and diagnosing problems with existing business procedures, planning, organizing and controlling the implementation of reengineered processes, the role of Information Technology in business process redesign, and IT based tools for analysis and design of Business Processes.

MGT 6058 IT Practicum (New). A new elective course for MBA students majoring in ITM.

This course is being offered at Georgia Tech for our MBA students who are interested in IT Management. The students will be working in groups of three individuals. The sponsoring organizations will describe their projects in the 1<sup>st</sup> week of class. Some organizations will offer more than project. Each group will have to select one project to work on for the semester. Note that all projects involve general management issues with a focus on information technology

MGT 6059 *Emerging Technologies* (New). A new elective course for MBA students majoring in ITM.

Emerging technologies have the potential to change business environments rapidly, with profound implications for industrial organization, economic equilibriums, financial markets, and the quality of everyday life. This course is designed to provide students an overview of how to evaluate emerging technologies and to manage in dynamic environments by examining strategies, models, competitive capabilities, and market forces. The topics are structured to present many complementary views for managerial consideration. Although our analyses are independent of specific technologies, we will rely heavily on exemplar emerging cases to illustrate key aspects of each topic.

## ii) Undergraduate

MGT 2200 *Computer-based Management Systems* (Revised).  
(Previously 3050)

This is the required ITM course for all undergraduate management students and introduces them to Management Information Systems, Strategic Uses of Information Systems, Decision Support Systems, Systems Life Cycle, Systems Administration, and Maintenance Issues.

MGT 4053 *Data Communications for Management* (New). Undergraduate ITM elective.

An introduction to data communications for management students. Concepts of network design, management, and security are introduced.

MGT 4056 *Electronic Commerce* (Revised) Undergraduate ITM elective.

This course is designed to provide students a fundamental understanding of the impact of Internet technology, the World Wide Web, and developing technologies (e.g. wireless, media convergence) on business strategies, business models, and business competitive capabilities. The course will generally take the perspective of applying Internet technologies to solving business problems typically within the context of commercial organizations; considering the business-to-business, business-to-consumer, and consumer-to-consumer market spaces.

MGT 4058 *Database and Information Systems Development* (New).

This is one of the electives in ITM for Management students.

This course is an introduction to information systems and data base management systems. The emphasis is on design principles, implementation issues, data base administration, and organizational implications. Students are taught various techniques to analyze information system requirements for business applications.

## **PhD Committees**

### **Chair of Dissertation Committees**

- Jinchang Wang, defended July 1990
- Mary Elizabeth Fritz, defended November 1995
- Michael Alan Smith, defended June 1998, (Co-Chair)
- Jai-Yeol Son, defended June 2001, (Co-Chair)
- Sung Kim, defended May 2001, (Co-Chair)
- Zhe Qu, defended June 2008

### Member of Dissertation Committees

- Nasr Eddine Belkeir, College of Computing, defended February 1992
- Kamal Karlapalem, College of Computing, defended December 1992
- Chungki Lee, College of Computing, defended Nov. 1993
- Vesper Owei, defended November 1994
- Russell J. Clark, College of Computing, defended May 1995
- Kiran J. Achyutuni, College of Computing, defended June 1995
- Antoine (Tony) Chaya, defended May 1997
- Mei Zhang, School of Industrial and Systems Engineering, defended September 1997
- Ashok Savasere, College of Computing, defended August 1998.
- Kyoo-Chul (KC) Shin, School of Civil Engineering, defended November 2000.
- Helen Thomas, defended September 2001
- Wei Hua, School of Industrial and Systems Engineering, defended July 2001
- Kaushik Dutta, defended May 2003
- Hansoo Kim, School of Industrial and Systems Engineering, defended April 2004
- Fang Zhong, defended summer 2007
- Jifeng Luo, defended, July 2008
- Sam Ransbotham, defended March 2008

### Masters Committees

- Member of Thesis Committee of M.S. Student, Arati Srinivasan, School of Textile and Fiber Engineering, defended, June 2001.

### Executive Education

- ITMP Executive Education Program

Program Director for the **Information Technology Management Partnership (ITMP)** Executive Education Program. This 55 hour program was developed and launched Fall 1997 in partnership with several Atlanta Area Organizations. The program was offered every Fall and Spring in both an Atlanta (for Atlanta area Partners) and Residence format (for non-Atlanta partners), with an average of 35 participants in each session.

- Executive Education Modules developed and taught

- “Database Design and Development,” *Internal Revenue Service*, 1991 – 1992

- “Expert Systems in Service Industries,” *Bell South Executive Development Program*, 1993 – 1995
- “Strategic Uses of Information Technology,”
  - *Georgia Tech Management Institute, (GTMI)*, 1994 – 1995
  - *Georgia Tech Mid-Management Program, (GT MMP)*, 1996 –
  - *Bell South Executive Development Program*, 1996
  - *NTU Program for High Performance Managers*, 1997
- “Management Information Systems,” *Apple South Management Institute*, 1995
- “Management Information Systems & China,” *Shanghai Municipal Leaders Program*, 1995 - 1997
- “Managing Information Technology Outsourcing,” *Information Technology Management Partnership*, 1997 – 2006

### **Academic Awards & Honors**

Was selected to participate in the 1986 Doctoral Consortium of the Seventh International Conference on Information Systems held in San Diego, December 12 - 14, 1986.

Was awarded a Presidential Fellowship by the Graduate School, The Ohio State University for outstanding research ability and promise (Fall 1986 – Summer 1987).

Received a fellowship at the University of Rochester from July 1981 to March 1984.

Winner of a Gold Medal for being judged the best Quantitative Methods student at the Indian Institute of Management, Bangalore, India.

Received a scholarship at the Indian Institute of Management, Bangalore, India, from July 1979 to April 1981.

Founding Member of the International Conference on Electronic Commerce (ICEC), Seoul, S. Korea, April 1998

Recognized by Georgia Tech (April 1998) as one of its exemplary senior faculty during the post-tenure review.

Nominated by the College of Management for Georgia Tech’s Outstanding Continuing Education Award, February 2001 & December 2001.

Nominated and selected for Senior Teaching Fellow (Hesburgh Fellow) Program at CETL, Georgia Tech – 2002

Appointed as the Robert A. Anclien Professor, 2007.

Appointed as Senior Associate Dean & Chief Operating Officer, June 2007.

Selected for Georgia Tech's University Leaders Program (2008-09).

### **Professional Membership**

The Institutes for Operations Research and Management Sciences (INFORMS),  
Institute of Electrical and Electronics Engineers (IEEE),  
Association for Computer Machinery (ACM)  
Association for Information Systems (AIS)