

KRISHNAN S. ANAND

Address:

OPIM, The Wharton School
University of Pennsylvania, PA 19104.

Webpage: <http://opim.wharton.upenn.edu/~anandk>

Email: anandk@wharton.upenn.edu

Tel: (215) 898 1175 (O)
(610) 896 6075 (R)

RESEARCH INTERESTS

Information, Incentives and Inventories in Supply Chain Management; Internet-based strategies – e-Supply chains and e-Procurement; Managing Information Flows within a firm’s supply chain; Modeling Information Systems.

TEACHING INTERESTS

Operations Management, specifically Supply Chain Management; Internet-based strategies; Information Systems.

- Taught the Operations Management core class in the MBA program, Kellogg Graduate School of Management, 1996-2000.
- Taught the following courses at the Wharton School:
 - OPIM 210: *Management Information Systems* for undergraduates
 - OPIM 632: *Supply Chain Management* for MBA students
 - OPIM 667: *Business Transformation* for MBA students
 - OPIM 670: *Topics in Information Strategy* for MBA students
 - OPIM 677: *Business Models and the Internet: Strategy, Operations, Information* for MBA students
 - OPIM 940: *Research in Operations Management: Issues and Methods* for PhD students
 - OPIM 941: *Advanced Operations Management* for PhD students
- Developed the following MBA-level elective at the Wharton School:
 - OPIM 677: *Business Models and the Internet: Strategy, Operations, Information*

EDUCATION

- Ph.D. in Business with specialization in Operations, Information, Technology (OIT), Stanford Graduate School of Business, Stanford University (1998).
- M.S. in Management Science, W. E. Simon School of Business, University of Rochester (1991).
- B.Tech in Computer Science, Indian Institute of Technology, Madras (1986).

EMPLOYMENT

- 2000- Assistant Professor at The Wharton School
- 1996-2000 Assistant Professor, Kellogg Graduate School of Management.
- 1991-1996 Research Assistant to Professor Haim Mendelson, Stanford Graduate School of Business.
- 1988-1989 Senior Systems Analyst, Frontier Information Technologies Ltd., Hyderabad, India.
 - Designed LIBRIS, a Library Information System, for the Indian Army; Studied the creation

of fonts for local languages using software font generators.

1986-1988 Founder and Director-Systems, Juggernaut Systems Consultants, Bangalore, India.

- Developed FORTRAN compiler front-end for a large computer company that served as the beta-testing site for Motorola Inc., USA.
- Designed and tested the software for a Rs. 23 million shares and debentures rights-issue for an Indian pharmaceutical concern of 30,000 employees.
- Established an EDP department for a pharmaceutical company: evaluated, hired and trained personnel to maintain systems.
- Conducted corporate training programs on computer software for chartered accountants, lawyers and businessmen, in association with the retail chain Computer Point.

COMPLETED RESEARCH

- 1) Anand, Krishnan S. and R. Aron, "*Quality, Incentives and Inspection Regimes in Offshore Service Supply Chains: Theory and Evidence*," **Wharton Working Paper Series**. (To be submitted to **Management Science**).
- 2) Anand, Krishnan S., M. Pac and S. Veeraraghavan, "*Quality-Speed Conundrum: Tradeoffs in Labor-Intensive Services*", **Management Science**, under review.
- 3) Anand, Krishnan S., "*Can Information and Inventories be Complements?*", **Management Science**, under review.
- 4) Anand, Krishnan S. and H. Mendelson, "*Postponement and Information in a Supply Chain*," **Manufacturing and Service Operations Management**, under revision for second round of review (received a 'revise and resubmit').
- 5) Anand, Krishnan S. and R. Aron, "*Forward Aggregation in Electronic B2B Markets: Model and Experimental Findings*," **Production and Operations Management Journal**, under revision for second round of review (received a 'revise and resubmit').
- 6) Anand, Krishnan S., P. Feldman and M. Schweitzer, "*Getting to NO: Theory and Evidence for Instrumental Negotiations*," **Management Science**, under revision for second round of review (received a 'revise and resubmit').
- 7) Anand, Krishnan S. and M. Goyal, "*Strategic Information Management under Leakage in a Supply Chain*", **Management Science**, forthcoming.
- 8) Anand, Krishnan S., R. Anupindi and Y. Bassok, "*Strategic Inventories in Vertical Contracts*," **Management Science**, forthcoming in October 2008.
- 9) Anand, Krishnan S. and K. Girotra, "*The Strategic Perils of Delayed Differentiation*," **Management Science**, May 2007, v53n5, pp. 697-712.

[Featured Article in May 2007 issue of **Management Science**.]
- 10) Anand, Krishnan S. and R. Aron, "*Group-Buying On The Web: A Comparison Of Price Discovery Mechanisms*," **Management Science**, November 2003, v49n11, pp. 1546-1562.

- 11) Anand, Krishnan S. and H. Mendelson, “*Information and Organization for Horizontal Multimarket Coordination*,” **Management Science**, December 1997, v43n12, pp. 1609-1627.

OTHER PUBLICATIONS

- 1) Anand, Krishnan S. and T. Hendershott, “*An Economic view of Information Systems*”, *Decision Support Systems*, 41, Number 4, May 2006.
- 2) Anand, Krishnan S. and H. Mendelson, “*Internal Revenue Service (1994-1995)*”, Stanford Business School case # *S-OIT-10, 11/95*, November 1995.

SELECTED RESEARCH IN PROGRESS

- “*The Power of Simple Wholesale Price Contracts*” (with Jun Li, PhD student)
- “*Strategic Retailers with Competition and Information Leakage: Sport Obermeyer Redux*” (with Manu Goyal).
- “*Long-Term versus Short-Term Contracts: Information, Inventories and the Ratchet Effect*” (with Ravi Anupindi and Yehuda Bassok).
- “*Electronic Buyer Consortia under Capacitated Supply: Theory and Evidence*” (with Ravi Aron)
- “*Advance Purchase Discounts: Information and Incentives*”(with Karan Girotra)
- “*Can more Information hurt your Supply Chain?*”(with Karan Girotra)

CURRICULUM DEVELOPMENT

- Developed and taught a new elective OPIM 677 “*Business Models and the Internet: Strategy, Operations, Information*” for the MBA program at the Wharton School.
- Designed and taught the course OPIM 940 “*Research in Operations Management: Issues and Methods*” for PhD students at the Wharton School.
- Extensively revised and revamped OPIM 632, core course in Operations Management (along with colleagues) for the MBA program at the Wharton School.
- Innovation in Existing Course: Developed a new 3-week module in Fall 2000 on “E-Commerce, E-Fulfillment and the Supply Chain” for OPIM 210, IS elective for undergraduates at the Wharton School; taught in 2000.
- Developed “*Internal Revenue Service (1994-1995)*” (with Haim Mendelson), Stanford Business School case # *S-OIT-10, 11/95*, used in the MBA “Systems” course at Stanford University.
- Designed and taught a course on Probability and Statistics for incoming Doctoral students in Business, Economics and Industrial Engineering at Stanford University, August-September, 1995.

ACADEMIC DISTINCTIONS AND SCHOLARSHIPS

- Ernst and Young Foundation/ICIS Doctoral Consortium Fellow, 1994.
- ORSA Doctoral Colloquium Fellow, 1994.
- IBM Fellow, University of Rochester, 1989-90.
- National Talent Scholar, 1980-1986: one among 200 students selected on an all-India basis.
- Secured all-India 70th and zonal 11th ranks in the Joint Entrance Examination for admission to the Indian Institutes of Technology (IITs) from 80,000 applicants, 1982.

SEMINARS AND CONFERENCE PRESENTATIONS

- Research presentations at several leading Business Schools, including at Carnegie Mellon University, Columbia University, Duke University, Harvard University, Lehigh University, Massachusetts Institute of Technology, New York University, Northwestern University, Ohio State University, Pennsylvania State University, Rutgers University, Stanford University, University of California at Berkeley, University of California at Davis, University of California at Irvine, University of California at Los Angeles, University of Chicago, University of Maryland at College Park, University of Michigan, University of North Carolina at Chapel Hill, University of Pennsylvania, University of Pittsburgh, University of Rochester, University of Southern California and University of Texas.
(Details below)
- Research presentations at many conferences in Operations Management and Information Systems, including INFORMS National Meetings; WISE, the premier conference on Information Systems and Economics; BAIRS; Multi-Echelon Inventory Conference; MSOM conference and MIT OM Summer Camp. (Details below)
- Panelist at the Workshop on Information Systems and Economics (WISE).
- Attendee (by invitation only) and presenter at the annual *Supply Chain Thought Leaders Round Table* for the past many years.
- Conducted tutorial on “*Auction Theory for Supply Chain Management*,” by invitation, at the 2003 Supply Chain Thought Leaders Round Table, Como, Italy.
- Research presentation by invitation at the Decision and Information Sciences (DIS) workshop (attendance by invitation only) on the theme of “IT/Operations Interface”, hosted by the University of Florida, Gainesville.
- Chair, session on Information Technology at the symposium on “Supply Chain Integration” organized by the Transportation Center, the Department of Industrial Engineering and Management Sciences and the Master of Management in Manufacturing (MMM) program, at Northwestern University.

SEMINAR TALKS AT LEADING UNIVERSITIES, BY INVITATION (in chronological order)

- 1) **Stanford School of Business, Stanford University:** “Information Systems, Coordination and Inventory under Demand Uncertainty,” November 1996.
- 2) **Sloan School of Management, Massachusetts Institute of Technology:** “Information Systems, Coordination and Inventory under Demand Uncertainty,” January 1996.
- 3) **Kellogg Graduate School of Management, Northwestern University:** “Information Systems, Coordination and Inventory under Demand Uncertainty,” January 1996.
- 4) **Columbia Graduate School of Business, Columbia University:** “Information Systems, Coordination and Inventory under Demand Uncertainty,” February 1996.
- 5) **The Wharton School, University of Pennsylvania:** “Information and Organization for Horizontal Multimarket Coordination,” February 1996.
- 6) **Stanford School of Industrial Engineering, Stanford University:** “Information Systems, Coordination and Inventory under Demand Uncertainty,” March 1996.
- 7) **Stern School of Business, New York University:** “Information and Organization for Horizontal Multimarket Coordination,” March 1996.
- 8) **University of Michigan Business School:** “Information and Organization for Horizontal Multimarket coordination”, October 1997.
- 9) **Kellogg Graduate School of Management, Northwestern University:** “Can Information and Inventories be Complements?”, March 1999.
- 10) **Katz School of Business, University of Pittsburgh:** “Can Information and Inventories be Complements?”, May 1999.
- 11) **Graduate School of Industrial Administration, Carnegie-Mellon University:** “Can Information and Inventories be Complements?”, May 1999.
- 12) **The Wharton School, University of Pennsylvania:** “Can Information and Inventories be Complements?”, September 1999.
- 13) **Graduate School of Business, University of Chicago:** “Can Information and Inventories be Complements?”, October 1999.
- 14) **Fuqua School of Business, Duke University:** “Can Information and Inventories be Complements?”, October 1999.
- 15) **Kenan-Flagler Business School, University of North Carolina at Chapel Hill:** “Can Information and Inventories be Complements?”, October 1999.
- 16) **Stern School of Business, New York University:** “Can Information and Inventories be Complements?”, January 2000.

- 17) **Graduate School of Industrial Administration, Carnegie-Mellon University:** “The Strategic Use of Inventories in Procurement Contracts”, January 2000.
- 18) **The Wharton School, University of Pennsylvania:** “The Strategic Use of Inventories in Procurement Contracts”, February 2000.
- 19) **Smeal College of Business Administration, The Pennsylvania State University:** “Can Information and Inventories be Complements?”, February 2000.
- 20) **Simon School of Business Administration, University of Rochester:** “Can Information and Inventories be Complements?”, March 2000.
- 21) **Fisher College of Business, Ohio State University:** “The Strategic Use of Inventories in Procurement Contracts”, January 2001.
- 22) **The Wharton School, University of Pennsylvania:** “Web-based Group-Buying”, December 2001.
- 23) **Fuqua School of Business, Duke University:** “The Strategic Use of Inventories in Procurement Contracts”, October 2002.
- 24) **Kenan-Flagler Business School, University of North Carolina at Chapel Hill:** “The Strategic Use of Inventories in Procurement Contracts”, October 2002.
- 25) **Harvard Business School, Harvard University:** “Group-Buying On The Web: A Comparison Of Price Discovery Mechanisms”, November 2002.
- 26) **Engineering Systems Group, Massachusetts Institute of Technology:** “The Strategic Use of Inventories in Procurement Contracts”, November 2002.
- 27) **The Anderson School of Business, University of California at Los Angeles:** “Group-Buying On The Web: A Comparison Of Price Discovery Mechanisms”, January 2003.
- 28) **Marshall School of Business, University of Southern California at Los Angeles:** “Group-Buying On The Web: A Comparison Of Price Discovery Mechanisms”, January 2003.
- 29) **Graduate School of Management, University of California at Irvine:** “Group-Buying On The Web: A Comparison Of Price Discovery Mechanisms”, January 2003.
- 30) **Rutgers Electronic Commerce Association, Rutgers University [Distinguished Guest Speaker Series]:** “Group-Buying On The Web: A Comparison Of Price Discovery Mechanisms”, May 2003.
- 31) **The Wharton School, University of Pennsylvania:** “The Strategic Perils of Delayed Differentiation”, October 2004.
- 32) **Department of Industrial and Systems Engineering, Lehigh University:** “Can Information and Inventories be complements?”, December 2004.
- 33) **Graduate School of Management, University of California at Davis:** “Can Information and Inventories be complements?”, January 2005.
- 34) **Stern School of Business, New York University:** “The Strategic Perils of Delayed Differentiation”, April 2005.

- 35) **Haas School of Business, University of California at Berkeley:** “Strategic Inventories in Vertical Contracts”, October 2006.
- 36) **Robert H. Smith School of Business, University of Maryland at College Park:** “Can Information and Inventories be complements?”, November 2007.
- 37) **Robert H. Smith School of Business, University of Maryland at College Park:** “Strategic Inventories in Vertical Contracts”, November 2007.
- 38) **The Wharton School, University of Pennsylvania:** “Strategic Information Management under Leakage in a Supply Chain,” March 2008.
- 39) **Marshall School of Business, University of Southern California at Los Angeles:** “Strategic Information Management under Leakage in a Supply Chain,” May 2008.
- 40) **McCombs School of Business, University of Texas at Austin:** September 2008.
[Forthcoming]

SELECTED CONFERENCE PRESENTATIONS

- 1) “Information Systems and Organizational Structure under Demand Uncertainty”, International Conference on Information Systems (ICIS) Doctoral Consortium, Victoria, Canada, December 1994.
- 2) “Information Systems and Organizational Structure under Demand Uncertainty”, Panelist, Workshop on Information Systems and Economics (WISE), Vancouver, Canada, December 1994.
- 3) “Information and Organization for Horizontal Multimarket Coordination,” Bay Area Information Research Society (BAIRS), Stanford, January 1995.
- 4) “Information, Inventory and Postponement in a Supply Chain,” Invited talk, Institute for Operations Research and Management Sciences (INFORMS), San Diego, California, May 1997.
- 5) “Information Systems and Inventory in a Manufacturing Firm’s Supply Chain,” Invited talk, INFORMS, Dallas, Texas, October 1997.
- 6) “Long--Term vs. Short--Term Contracting: Information, Inventories and the Ratchet Effect”, Invited talk, INFORMS, Seattle, October 1998.
- 7) “Postponement and Information in a Supply Chain,” WISE, New York, December 1998.
- 8) “Postponement and Information in a Supply Chain,” Invited talk, Decision and Information Sciences (DIS) workshop (attendance by invitation only) on the theme of “IT/Operations Interface”, hosted by the University of Florida, Gainesville, February 1999.
- 9) “Can Information and Inventories be Complements?”, Massachusetts Institute of Technology Summer Camp in Operations, Boston, MA, June 1999.
- 10) “Can Information and Inventories be Complements?”, Multiechelon Inventory Conference, Purdue University, West Lafayette, IN, June 1999.

- 11) "Inventories versus Incentives: The Strategic Use of Inventories in Supplier-Retailer Contracts", Invited talk, INFORMS, Philadelphia, October 1999.
- 12) "Can Information and Inventories be Complements?", WISE, Charlotte, NC, December 1999.
- 13) "Strategic Inventories in Procurement Contracts", Invited talk, Supply Chain Thought Leaders Roundtable, Boston, MA, August 2000.
- 14) "Can Information and Inventories be Complements?", Invited talk, Production and Operations Management Society (POMS) 2001 conference, Orlando, FL, March 2001.
- 15) "Volume-Buying on the Web: Quantity Discounts and the Coordination Problem", Invited talk, INFORMS, Maui, HA, June 2001.
- 16) "Group-Buying On The Web: A Comparison Of Price Discovery Mechanisms", Invited talk, Supply Chain Thought Leaders Roundtable, INSEAD, France, August 2001.
- 17) "Group-Buying On The Web: A Comparison Of Price Discovery Mechanisms", WISE, New Orleans, LA, December 2001.
- 18) "Auction Theory for Supply Chain Coordination", Invited Tutorial Session, Supply Chain Thought Leaders Round Table, Como, Italy, July 2002.
- 19) "Group-Buying On The Web: A Comparison Of Price Discovery Mechanisms", Invited talk, 7th Annual Conference on Information Systems and Technology (CIST), San Jose, CA, November 2002.
- 20) "Strategic Inventories in Procurement Contracts", Invited talk, INFORMS, San Jose, CA, November 2002.
- 21) "Forward and Reverse Aggregation Equilibria in Electronic B2B Markets: Pricing and Market Efficiency," WISE, Seattle, WA, December 2003.
- 22) "The Strategic Perils of Delayed Differentiation", Invited talk, INFORMS, Denver, CO, October 2004.
- 23) "Impact of Information Leakage in a Supply Chain", Invited talk, INFORMS, Denver, CO, October 2004.
- 24) "Impact of Information Leakage in a Supply Chain", WISE, Washington DC, December 2004.
- 25) "The Strategic Perils of Delayed Differentiation", Multiechelon Inventory Conference, Northwestern University, Chicago, IL, June 2005.
- 26) "Incentives for Information Acquisition and Dissemination in a Supply Chain", MSOM Conference, Northwestern University, Chicago, IL, June 2005.
- 27) "The Strategic Perils of Delayed Differentiation", MSOM Conference, Northwestern University, Chicago, IL, June 2005.
- 28) "Incentives for Information Flows in Supply Chains", Invited Talk, Supply Chain Thought Leaders Round Table, Heidelberg, Germany, July 2005.
- 29) "The Strategic Perils of Delayed Differentiation", WISE, Irvine, CA, December 2005.

- 30) “Information Asymmetry and Advance Purchase Discounts in Supply Chains”, Invited talk, INFORMS, Pittsburgh, PA, November 2006.
- 31) “Incentives for Information Flows in a Vertical Contract”, Invited talk, INFORMS, Pittsburgh, PA, November 2006.
- 32) “The Use and Abuse of the Negotiation Process with an Application to a Supply Chain”, Invited talk, INFORMS, Pittsburgh, PA, November 2006.
- 33) “Incentives for Information Acquisition and Dissemination in a Supply Chain”, Conference on Information Systems and Technology (CIST), Pittsburgh, PA, November 2006.
- 34) “Quality, Incentives and Inspection Regimes in Offshore Service Supply Chains: Theoretical Predictions and Behavioral Outcomes”, International Symposium on Information Systems, Indian School of Business, Hyderabad, India, December 2006.
- 35) “Quality, Incentives and Inspection Regimes in Offshore Service Supply Chains: Theoretical Predictions and Behavioral Outcomes”, WISE, Chicago, IL, December 2006.
- 36) “Strategic Information Management Under Leakage in a Supply Chain”, POMS, Dallas, TX, May 2007.
- 37) “Strategic Information Management Under Leakage in a Supply Chain”, Indiana Conference on Supply Chain Design, Bloomington, IN, May 2007.
- 38) “Strategic Information Management Under Leakage in a Supply Chain”, Invited talk, INFORMS, Seattle, WA, November 2007.
- 39) “Structure of the Inspection Regime, Inspection Intensity & Extent, and Output Quality in Offshore Outsourcing of Services: Theory and Evidence”, WISE, Montreal, Canada, December 2007.
- 40) “Strategic Information Management Under Leakage in a Supply Chain”, MSOM 2008 Supply Chain Management SIG Conference, University of Maryland at College Park, MD, June 2008.
- 41) “Quality-Speed Tradeoff in Services: The waiting/service time conundrum”, MSOM Conference, University of Maryland at College Park, MD, June 2008.
- 42) “Getting to NO: Theory and Evidence for Instrumental Negotiations”, Academy of Management Annual Meeting, Anaheim, California, August 2008.

SERVICE ACTIVITIES

- Associate Editor, *Management Science* journal, 2004-present.
- Senior Editor, *Productions and Operations Management* journal, 2003-present.
- Associate Editor (*ad hoc*), *Operations Research* journal.
- Associate Editor (*ad hoc*), *Information Systems Research* journal.
- Guest Editor (by invitation) for *The Journal of Decision Support Systems*, Special Issue on *Economics and Information Systems* (Volume 41, Number 4, May 2006).

- Member, Program Committee for the International Conference on Information Systems (ICIS) 2000 conference.
- Member, Nicholson Committee, for 2002-2003 and 2006-2007. (The Nicholson prize, awarded by INFORMS each year, honors the best student papers in the field of operations research and the management sciences.)
- Member, Editorial Review Board, *MSOM* Conference, College Park, Maryland (2008).
- Member, Editorial Review Board, *MSOM* Conference, Atlanta, Georgia (2006).
- Advising Doctoral students as well as serving on their thesis committees.
 - Currently working on research with the following doctoral students: Andres Catalan-Cardenas, Pnina Feldman, Jun Li, Mehmet Fazil Pac, Ramnath Vaidyanathan.
 - Co-Advisor to Karan Girotra (Operations and Information Management; The Wharton School)-- placed at INSEAD (France).
 - Doctoral Dissertation Committee member for Thomas Weber (Operations and Information Management; The Wharton School)-- graduated & placed at Stanford University.
 - Doctoral Dissertation Committee member for Manu Goyal (Operations and Information Management; The Wharton School)-- graduated & placed at University of Maryland.
 - Doctoral Dissertation Committee external member for Banu Gemici (College of Engineering and Applied Science; Lehigh University)
- Co-Principal Investigator, Project on “*Distributed and Collaborative Supply Chain Integration Via Electronic Markets*” (Principal Investigator: Morris Cohen), Subcontract No. 540075-8001 with Lehigh University, NSF Prime Grant No. DMI01-21395.
- Discussant for papers at the Workshop on Information Systems and Economics (WISE).
- Adhoc referee for *European Journal of Operational Research*, *Management Science*, *Information Systems Research*, *Operations Research*, *Marketing Science*, *IIE Transactions*, *Manufacturing and Service Operations Management (MSOM)*, *Journal of Organizational Computing*, *Journal of Decision Support Systems(DSS)* and *POMS Journal*.
- Member of Institute for Operations Research and Management Sciences (INFORMS) and of Manufacturing and Service Operations Management society (MSOM).
- Committee Memberships, OPIM department, The Wharton School:
 - Ph.D Admissions Committee, 2000 – 2002.
 - Strategic Course Planning Committee, 2000 – 2001.
 - Seminar Committee, 2002 – 2003 and 2004 – 2007.
- Penn Reading Project (Introducing incoming Freshmen to the joys of reading), 2003-2007.

HOBBIES AND INTERESTS

Chess, Cycling, Swimming, Yoga, Clinical Psychology, Philosophy, Reading fiction and non-fiction—from Asimov to Zola.

CITIZENSHIP AND VISA STATUS

Citizen of India; Permanent Resident in the United States.