

Curriculum Vitae

Karthik Natarajan Kannan

ADDRESS

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EDUCATION

- Aug. 2003 H. John Heinz III School of Public Policy and Management, Carnegie Mellon University
Ph.D. in Information Systems
- May 2001 Electrical and Computer Engineering, Carnegie Mellon University
Master of Science in Electrical and Computer Engineering
- Aug. 2000 H. John Heinz III School of Public Policy and Management, Carnegie Mellon University
Master of Philosophy in Public Policy and Management
- May 1996 Regional Engineering College, Trichy, India
Bachelor of Electrical and Electronics Engineering

EXPERIENCE

- 2003-Present Krannert School of Management, Purdue University West Lafayette, IN
Assistant Professor of Management
- 1999-2000 Carnegie Mellon University Pittsburgh, PA
Research Assistant: Project for Census Bureau
Analyzed Confidentiality in data released by the Census
- 1998-2003 Carnegie Mellon University Pittsburgh, PA
Research Assistant: Ibiza Project
Design, Implement and Study Agent-based Market structures
- 1997-1998 ConAgra Inc (Infosys Technologies) Omaha, NE
Liaison for the off-shore team
Project team belonged to Infosys Technologies
- 1996-1997 Infosys Technologies Bangalore and Chennai, India
Software Engineer, Developer, and Module Leader

TEACHING

MGMT 683: Information Technology for Managers (formerly, Management Information Systems), MBA core course, Purdue University. Module 4 of Spring 2006, Spring 2007, Spring 2008 and Spring 2009.

MGMT 590: Management Information Systems, Weekend MBA core course, Purdue University. Module 3 of Spring 2009.

MGMT 382 (formerly, 482): Introduction to Management Information Systems, Undergraduate core course, Purdue University. Summer and Fall 2004, Summer 2005, Fall 2006, Summer 2008, Summer 2009 and Fall 2009.

MGMT 544: Database Management, Purdue University. Spring 2004.

MGMT 690M: Doctoral Research Seminar in MIS, Purdue University. Fall 2003, Fall 2005, and Fall 2007.

95-729: E-Commerce Technologies, MISM elective, Carnegie Mellon University. Summer 2002, Fall 2001, and Summer 2001.

95-730: E-Commerce (Co-taught with Professor Mike Smith; handled the technology component of the course), MISM core course, Carnegie Mellon University. Spring 2000.

REFEREED JOURNALS

Greenwald, A., Kannan, K., and Krishnan, R. (2009, Forthcoming) "On Evaluating Information Revelation Policies in Procurement Auctions: A Markov Decision Process Approach," *Information Systems Research*, 20(4).

Tawarmalani, M., Kannan, K., and De, P. (2009) "Allocating Objects in a Network of Caches: Centralized and Decentralized Analyses," *Management Science*, 55(1): 132-147.

Kannan, K., Rees, J., and Sridhar, S. (2007) "Market Reactions to Security Breach Announcements: An Empirical Analysis," *International Journal of E-Commerce*, 12(1): 69-91.

Arora, A., Greenwald, A., Kannan, K., and Krishnan, R. (2007) "Effects of Information Revelation Policies Under Market Structure Uncertainty," *Management Science*, 53(8): 1234-1248.

Kannan, K., and Telang, R. (2005) "Markets for Software Vulnerabilities? Think again," *Management Science*, 51(5): 726-741.

PAPERS UNDER REVIEW

Kannan, K. "Effects of Revelation Policies under Cost Uncertainty" (under revision for second round of review at *Information Systems Research*).

Balachander, S., Kannan, K., and Schwartz, D. "A Theoretical and Empirical Analysis of Alternate Auction Policies for Search Advertisements" (under third round of review at *Review of Marketing Science*).

WORKING PAPERS

Cason, T., Kannan, K., and Siebert, R. “An Experimental Study of Information Revelation Policies in Sequential Auctions” (will soon be submitted to *Management Science*).

Wang, T., Rees, J., and Kannan, K. “The Association between the Disclosure and the Realization of Information Security Risk Factors.”

Zhang, G., Kannan, K., and Tan, Y. “Optimal Patching Effort against Internet Worms.”

WORK IN PROGRESS

Balachander, S., Kannan, K., and Kim, A. “Optimal Number of Slots in Search Auctions.”

Kannan, K., and Telang, R. “Welfare Implications of Data Purge Policies.”

Forman, C., Kannan, K., and Rees, J. “Information Security Policies and their Impacts on Offshoring Decisions.”

Hashim, M., Kannan, K., and Wegener, D. “The Antecedents of Piracy and its Intentions.”

INVITED PUBLICATION

Koo, S., Kannan, K., and Lee, G. (2006) “On Neighbor Selection Strategy in Hybrid Peer-to-Peer Networks,” *Future Generation Computer Systems*, 22(7): 732-741. The journal coordinated with organizers of *ICCCN, 2004* to select a few papers from the conference for a special issue. (See also the Papers in Refereed Conference Proceedings section.)

PAPERS IN REFEREED CONFERENCE PROCEEDINGS

Wang, T., Rees, J., and Kannan, K. “Reading the Disclosures with New Eyes: Bridging the Gap between Information Security Disclosures and Incidents,” *Proceedings of the Seventh Workshop on Economics of Information Security (WEIS)*, June 2008.

Rahman, M., Kannan, K., and Tawarmalani, M. “The Countervailing Incentive of Restricted Patch Distribution: Economic and Policy Implications,” *Proceedings of the Sixth Workshop on Economics of Information Security (WEIS)*, June 2007.

Zhang, G., Kannan, K., and Tan, Y. “Optimal Patching Effort against Internet Worms,” *Proceedings of the Sixteenth Annual Workshop on Information Technology and Systems (WITS)*, December 2006.

Tawarmalani, M., Kannan, K., and De, P. “A Mechanism for Allocating Objects in a Network of Symmetric Caches,” *Proceedings of the Tenth Annual Workshop on Information Technology and Systems (WITS)*, December 2005. (Received the best paper award; see also the Awards and Honors section.)

Koo, S., Lee, G., and Kannan, K. “A Resource-trading Mechanism for Efficient Distribution of Large-volume Contents on Peer-to-Peer Networks,” *Proceedings of the International Conference On Computer Communications and Networks (ICCCN)*, October 2005.

Koo, S., Lee, G., and Kannan, K. “An Incentive-compatible Capacity Assignment Algorithm for Bulk Data Distribution Using P2P,” *Proceeding of the 24th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC)*, October 2005.

Kannan, K., Rees, J. and Sridhar, S. "The Effects of Information Security Breach Announcements on Stock Prices: Long-term Impacts and the Role of Technology Bubble," *Proceedings of the Ninth INFORMS Conference on Information Systems and Technology (CIST)*, October 2004.

Koo, S., Kannan, K., and Lee, G. "A Genetic-Algorithm-Based Neighbor-Selection Strategy for Hybrid Peer-to-Peer Networks," *Proceedings of the International Conference On Computer Communications and Networks (ICCCN)*, October 2004: 469-474. (See also the Invited Publication section.)

Kannan, K., and Telang, R. "An Economic Analysis of the Market for Software Vulnerability Disclosure," *Proceedings of the Third Workshop on Economics of Information Security (WEIS)*, May 2004.

Greenwald, A., Kannan, K., and Krishnan, R., "A Computational Approach to Compare Information Revelation Policies," *Proceedings of the International Conference on Information Systems (ICIS)*, Seattle, December 2003: 706-719.

Arora, A., Choudhary, V., Kannan, K., Krishnan, R. and Padman, R. "On Analyzing Interactions in a Software Agent Marketplace," *Proceedings of the Tenth Annual Workshop on Information Technology and Systems (WITS)*, December 2000. (Received the best paper award; see also the Awards and Honors section.)

PAPERS IN CONFERENCE PROGRAMS

Wang, T., Kannan, K. and Rees, J. "Investors' Perceptions on Information Security Incidents," *Workshop on Information Systems Economics (WISE)*, December 2008.

Kannan, K., and Siebert, R. "The Impact of Ex ante Licensing Contracts on Innovation: Evidence from the Semiconductor Industry," *Workshop on Information System Economics (WISE)*, December 2007.

Balachander, S., and Kannan, K. "Auctioning Online Advertisements," *The First Annual International Symposium on Information Systems (ISIS)*, December 2006.

Kumar, C., Altinkemer, A., De, P. and Kannan, K. "A Pricing and Allocation Mechanism for Peer-to-Peer Networks," *Workshop on Information System Economics (WISE)*, December 2005.

Tawarmalani, M., Kannan, K., De, P. and Kumar C. "Allocating Objects in a Network of Caches," *International Conference on Complementarity, Duality and Global Optimization in Science and Engineering (CDGO)*, August 2005.

Greenwald, A., Kannan, K. and Krishnan, R. "Effect of Information Revelation Policies Under Market Structure Uncertainty," *Workshop on Information System Economics (WISE)*, December 2002.

Arora, A., Choudhary, V., Kannan, K., Krishnan, R. and Schneider, J. "Effect of Information Revelation Policies in a Web-Services Marketplace," *Proceedings of Computational Analysis of Social and Organizational Systems (CASOS)*, June 2002.

Arora, A., Choudhary, V., Kannan, K., Krishnan, R. and Padman, R. "Hierarchies Vs Markets: Using software agent marketplace," *Proceedings of Computational Analysis of Social and Organizational Systems (CASOS)*, June 2001.

INVITED PRESENTATIONS

“Repositioning Video Content in a Peer-to-Peer Network,” AT&T Labs Research, Morristown, July 30th, 2009.

“Auctions in Electronic Market Contexts,” Annual Big 10 MIS Consortium, Indiana University, Bloomington, May 2nd, 2009.

“Experimental Analyses on the Impact of Revelation Policies in Sequential Auctions with Cost Uncertainty,” University of Notre Dame University MIS Research Symposium, South Bend, May 8th, 2009.

“Experimental Analyses on the Impact of Revelation Policies in Sequential Auctions with Cost Uncertainty,” Carnegie Mellon University, Pittsburgh, January 30th, 2009.

“Experimental Analyses on the Impact of Revelation Policies in Sequential Auctions with Cost Uncertainty,” University of Washington, Seattle, October 31st, 2008.

“The Impact of Information Security Disclosures on Market Reactions to Security Breaches,” Georgia Institute of Technology, Atlanta, September 25th, 2008.

“Allocating Objects in a Network of Caches: Centralized and Decentralized Analyses,” University of Minnesota, Minneapolis, February 21st, 2008.

“Effects of Revelation Policies under Cost Structure Uncertainty,” University of Texas at Dallas, September 21st, 2007.

“Allocating Objects in a Network of Caches: Centralized and Decentralized Analyses,” INFORMS 2006.

“Markets for Vulnerabilities? Think Again,” University of Illinois, Urbana-Champaign, April 8th, 2005.

“A Computational Approach to Compare Information Revelation Policies,” University of Illinois, Chicago, April 1st, 2005.

“A Computational Approach to Compare Information Revelation Policies,” The DIS Workshop, University of Florida, February 24th, 2005.

“Economic Analysis of Market for Information Security,” INFORMS 2004.

“Effect of Revelation Policies Under Market Structure Uncertainty,” INFORMS 2004.

SPONSORED ACTIVITIES

Co-Principal Investigator (with Vijay Pai as the PI), AT&T Labs, “Peer-to-Peer Strategies for a VOD Content Distribution Network,” July 2009 – April 2010, \$25,000.

Principal Investigator, (with Jackie Rees as another PI and Eugene Spafford as a Co-PI), McAfee Inc., “Unsecured Economies,” June 2008 – Jan. 2009, \$45,000.

PROFESSIONAL ACTIVITIES

Associate Editor for *Information Systems Research* beginning January 2010.

Co-Chair (with Anitesh Barua and Yong Tan) for *Conference on Information Systems and Technology (CIST)* in 2010.

Associate Editor for *International Conference on Information Systems (ICIS)* 2009, *Pacific Asia Conference on Information Systems (PACIS)* 2009.

Editorial review board member for *Journal of Database Management* since May 2005.

Reviewer for *Management Science*, *Information Systems Research*, *International Journal of Electronic Commerce*, *Information Technology and Management*, *Decision Support Systems*, *Journal of Management Information Systems*, *Journal of Association of Information Systems*, *European Economic Review*, *Workshop on Information Technology and Systems (WITS)*, *International Conference on Information Systems (ICIS)*, and *Americas Conference on Information Systems (AMCIS)*.

Program committee member for *Conference on Information Systems and Technology (CIST)* 2005, 2006, 2007, 2008, 2009; *International Conference on Information Systems, Technology and Management (ICISTM)* 2007, 2008, 2009; *International Symposium of Information Systems (ISIS)* 2006, 2007; *World Wide Web*, 2008; and *Workshop on Economics of Information Security (WEIS)* 2008; *Workshop on Information Technology and Systems (WITS)* 2005, 2006, 2007, 2008, 2009.

Member of INFORMS and AIS.

SCHOOL SERVICES

DCCME/GSCM Advisory Committee, 2009-2010.

MIS Area Faculty Recruiting Committee, 2005.

MIS Area MGMT 683 Course Content Review Committee, 2005-2009.

MIS Area MGMT 382 (formerly, 482) Course Content Review Committee, 2005-2009.

MIS Area Doctoral Student Admissions Committee, 2004-2009.

Krannert IT Committee, 2004-2005.

MIS Ph.D. Program Co-coordinator, 2003-2005.

Grievance Committee, 2003-2009.

AWARDS AND HONORS

CERIAS Fellow since 2009.

PRF International Travel Grant, 2008.

Best Reviewer Award (Co-winner), *Information Systems Research*, 2007.

DCMME/GSCMI DeVos Award (Co-winner), 2006-2007.

CIBER International Travel Award, Spring 2006.

Distinguished Core Course Teacher in the MBA program at Purdue University for Module 4 of Spring 2006, Spring 2007, Spring 2008 and Spring 2009.

Best Paper Award, The 15th Annual Workshop on Information Technology and Systems, Las Vegas, 2005.

John and Mary Willis, Young Faculty Award, Krannert School of Management, Purdue University, 2005.

Nominated for the 1st International Doctoral Consortium, Delft, Netherlands, 2002.

Member of the Electrical Engineering honor society, Eta Kappa Nu, since 2002.

Best Paper Award, The 10th Annual Workshop on Information Technology and Systems, Brisbane, 2000.

Best “Y2k” Project, Infosys Technologies, India, 1998.

MEDIA AND OTHER NON-ACADEMIC CITATIONS

Quoted in Forbes. (2009). “Putting a Price on CyberSpying.”

Unsecured Economies Report, the McAfee Inc. sponsored study, cited by the White House (2009, p.2). “Assuring a Trusted and Resilient Information and Communications Infrastructure.”

MASTERS STUDENT ADVISING

Rina Mansukhani, Carnegie Mellon University, “XML Translation Issues,” August 2002.

Smit Gupta, Carnegie Mellon University, “Simulating Electronic Marketplaces,” December 2002.

DOCTORAL STUDENT ADVISING

Matthew Hashim (Co-Chair), Third year student, Krannert School of Management, Purdue University.

Ta-wei Wang (Co-Chair), “Essays on Information Security from an Economic Perspective,” Krannert School of Management, Purdue University. Graduated 2009 (National Taiwan University).

Mohammad Rahman (Dissertation Committee), “A Study Of the Effects of Low Search Cost Online: How Product Selection Technology Usage and Spatiality Drive Consumer Demand,” Krannert School of Management, Purdue University. Graduated 2008 (University of Calgary).

Chetan Kumar (Co-Chair), “Essays on Peer-to-Peer Resource Allocation and Caching Mechanisms in Computer Networks,” Krannert School of Management, Purdue University. Graduated 2006 (California State University, San Marcos).

Simon Koo (Co-Chair), “Bulk Content Distribution Using Peer-to-Peer Overlay: Design and Analysis,” Electrical and Computer Engineering, Purdue University. Graduated 2006 (San Diego University).