## **Curriculum Vitaé**

## **Rahul Telang**

### **Professor of Information Systems and Management,**

#### ADDRESS

The H. John Heinz III College Carnegie Mellon University 4800 Forbes Avenue Pittsburgh, PA 15213

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### **EDUCATION**

**PhD** (Information Systems), Tepper School of Business, Carnegie Mellon University, 2002. **Thesis:** Consumer Choice of Internet Search Engines: Empirical and Analytical Framework

M.S. Industrial Administration (Information Systems), May 1999, GSIA, Carnegie Mellon University

MBA, May 1997, Indian Institute of Foreign Trade, New Delhi, India

**B.E.** Electrical and Electronic Engineering, December 1993, Birla Institute of Technology and Science, Pilani, India

### **EMPLOYMENT**

2001-2007, Assistant Professor of Information Systems and Management, H. J Heinz III College, Carnegie Mellon University

2007- 2010, Associate Professor of Information Systems and Management (without tenure), H. John Heinz III College, Carnegie Mellon University

2009-2011, Dean's Career Development Associate Professor.

2011- present, Professor of Information Systems and Management, H. John Heinz III College, Carnegie Mellon University

### **TEACHING**

- 90924 Phd Seminar on "Economics of Information Security"
- 95751 Information Security and Risk Management, Carnegie Mellon University.

95705 – Telecommunication Management, Carnegie Mellon University. 70451 – Management Information Systems, Carnegie Mellon University.

#### JOURNAL PUBLICATIONS

- 1. Anuj Kumar, Rahul Telang, "Product Customization and Customer Service Cost: An Empirical Analysis", *Manufacturing and Service Operations Management* (*MSOM*).
- 2. Anuj Kumar, Rahul Telang, "Does the Web decrease Customer Service Cost? An Empirical analysis", *Information Systems Research* (ISR).
- 3. S Wattal, R Telang, T Mukhopadhyay, P Boatwright, "What's in a name? Use of Consumer Information on Email Advertising", *Information Systems Research* (ISR) forthcoming
- 4. Sasha Romanosky, Rahul Telang, Alessandro Acquisti, "Do data breach disclosure laws reduce identity theft", conditionally accepted, *Journal of Policy Analysis and Management* (JPAM).
- 5. B Danaher, S Dhanasobhon, M Smith, R. Telang, "Converting Pirates without Cannibalizing Purchasers: The Impact of Digital Distribution on Physical Sales and Internet Piracy", *Marketing Science*, forthcoming.
- 6. Michael D Smith, Rahul Telang, "Piracy or Promotion? The Impact of Broadband Internet Penetration on DVD Sales", *Information Economics and Policy*, forthcoming.
- 7. A. Arora, A Nandkumar, C Forman, R Telang (2010), "Competition and Patching of Security Vulnerabilities: An Empirical Analysis", *Information Economics and Policy*, 10, 164-177
- 8. Youngsoo Kim, Rahul Telang, Bill Vogt, Ramayya Krishnan (2010), "An Empirical Analysis of Mobile Voice and SMS service: A Structural Model", *Management Science*, 56(2). 234-252
- 9. Sunil Wattal, Rahul Telang, Tridas Mukhopadhyay (2009), "Information Personalization in a Two-Dimensional Product Differentiation Models", *Journal of MIS*, 26(2), 69-96.
- Michael Smith, Rahul Telang (2009), "Competing with Free: The Impact of Movie Broadcasts on DVD Sales and Internet Piracy", <u>MIS Quarterly</u>, 33(2), 321-338.
- Ashish Arora, R Krishnan, R Telang, Y Yang (2010) "An Empirical Analysis of Software Vendors' Patch Release Behavior: Impact of Vulnerability Disclosure", *Information Systems Research (ISR)*, 21(1), 115-132.
- 12. Ashish Arora, Rahul Telang, Hao Xu (2008), "Optimal Policy for Software Vulnerability Disclosure", *Management Science*, 54(4), 642-656
- Rahul Telang, Sunil Wattal (2007), "An Empirical Analysis of the Impact of Software Vulnerability Announcements on Firm Stock Price", *IEEE Transactions on Software Engineering*, 33 (8), 544-557.
- Ramayya Krishnan, Michael D. Smith, Zhulei Tang, Rahul Telang (2007) "Digital Business Models for Peer-to-Peer Networks: Analysis and Economic Issues", *<u>Review of Network Economics</u>*, 6(2), 194-213.

- S Bhattacharjee, R Gopal, K Lertwachara, J Marsden, R Telang (2007), "The Effect of Digital Sharing Technologies on Music Markets: A Survival Analysis of Albums on Ranking Charts", <u>Management Science</u>, 53(10), 1359-1374
- Ashish Arora, Anand Nandkumar, Rahul Telang (2006), "Does Information Security attack frequency increase with Vulnerability Disclosure? - An Empirical Analysis", *Information Systems Frontier*, 8(5), 350-362.
- Anindya Ghose, Michael D. Smith, Rahul Telang (2005), "Internet Exchanges for Used Books: An Empirical Analysis of Product Cannibalization and Welfare Impact", *Information Systems Research* (*ISR*), 17(1), 3-19.
- 18. Ashish Arora, Jonathan P. Caulkins, Rahul Telang (2005), "Sell First, Fix Later: Impact of Patching on Software Quality", *Management Science*, 52(3), 465-471.
- 19. Karthik Kannan, Rahul Telang (2005), "Market for Software Vulnerabilities? Think Again", <u>Management Science</u>, 51(5), 726-740.
- 20. Robert E. Kraut, Shyam Sunder, Rahul Telang, James Morris (2005), "Pricing to Solve the Problem of Spam", *Human-Computer Interaction*, 20, 195-223.
- 21. Ashish Arora, Rahul Telang (2005), "Economics of Software Vulnerability Disclosure", *IEEE* <u>Security and Privacy</u>, 3 (1), 20-25.
- 22. Rahul Telang, Tridas Mukhopadhyay (2005), "Drivers of Web Portal Use", *Electronic Commerce <u>Research and Applications</u>.* 4(1): 46-62.
- 23. Anindya Ghose, Rahul Telang, Ramayya Krishnan (2005), "Impact of Electronic Secondary Markets on Information Goods Supply Chain", *Journal of MIS*, 22(2), 91-120.
- 24. Rahul Telang, Peter Boatwright, Tridas Mukhopadhyay (2004), "A Mixture Model for Internet Search Engine Visits", *Journal of Marketing Research*, 41(2), 206-214.
- 25. Rahul Telang, Uday Rajan, Tridas Mukhopadhyay (2004), "The Market Structure for Internet Search Engines", *Journal of MIS*, 21(2), 137-160.
- 26. Ramayya Krishnan, Michael Smith, Rahul Telang (2004), "The Economics of Peer to Peer Networks", *Journal of Information Technology Theory and Application*, 5(3), 31-44.
- Ashish Arora, D Hall, C. A. Pinto, D Ramsey, R Telang (2004), "Measuring the Risk Based Value of IT Security Solutions", *IEEE IT Professional*, 6(6), 35-42.
  BOOK CHAPTER
- "A Survival Analysis of Albums on Ranking Charts" A chapter in the book *Peer to Peer Video: The Economics Policy and Culture of Toda's New Mass Medium*, Edited by Eli Noam and Lorenzo Pupillo, Springer 2008.

### WORKING PAPERS

- Rodrigo Belo, Pedro Ferreira, Rahul Telang (2010), "Impact of Broadband in Schools: Evidence from Portugal", *working paper*, Carnegie Mellon University. (Ready to be submitted to Review of Economics and Statistics).
- Anuj Kumar, Mike Smith, Rahul Telang (2010), "The broadcast window effect: Information Discovery and Cross-channel Substitution Patterns for Media Content", *working paper*, Carnegie Mellon University.
- Vineet Kumar, Rahul Telang, Tridas Mukhopadhyay (2010), "Optimally securing interconnected information systems and assets", *working paper*, Carnegie Mellon University.

### PAPERS IN REFEREED CONFERENCE PROCEEDINGS

- Rajiv Garg, Michael Smith, Rahul Telang (2010), "Discover of music through peers in online community", 42<sup>nd</sup> Hawaiian International Conference on Information Systems (HICSS), IEEE Computer.
- Rodrigo Belo, Pedro Ferreira, Rahul telang (2010), "Broadband in Schools: Does it help or hurt student performance", *International Conference on Information Systems (ICIS, St. Louis), forthcoming.*
- Danaher, Brett, Samita Dhanasobhon, Michael D. Smith, Rahul Telang (2009), "Converting Pirates without Cannibalizing Purchasers: The Impact of New Digital Distribution Channels on Internet Piracy", *International Industrial Organization Conference (IIOC)*, Boston, Massachusetts, April 3-5.
- Sunil Wattal, Rahul Telang, Tridas Mukhopadhyay (2009), "Information Personalization in a Two-Dimensional Product Differentiation Models", 41st *Hawaiian International Conference on Information Systems (HICSS)*, IEEE Computer.
- Samita Dhanasobhon, Michael D. Smith, Rahul Telang (2008), "Converting Pirates without Cannibalizing Purchasers: The Impact of New Digital Distribution Channels on Internet Piracy", *CIST*, Washington DC.
- Youngsoo Kim, Rahul Telang, Bill Vogt, R Krishnan (2007), "Empirical Analysis of Mobile Voice and SMS service: A Structural Model", *International Conference on Information Systems (ICIS, Montreal)*, December 10-12.
- Michael D Smith, Rahul Telang (2007) "Competing with Free: The Impact of Movie Broadcasts on DVD Sales and Internet Piracy", *International Conference on Information Systems (ICIS, Montreal)*, December 10-12.
- A Arora, R Krishnan, R Telang, and Y Yang (2006), "How quickly do they Patch? An Empirical Analysis of Vendor Response to Disclosure Policies", *International Conference on Information Systems (ICIS, Milwaukee)*, December 13-15.

- Alessandro Acquisti, Allan Friedman, and Rahul Telang (2006), "Is There a Cost to Privacy Breaches? An Event Study", *International Conference on Information Systems (ICIS, Milwaukee)*, December 13-15.
- Michael D Smith, Rahul Telang (2006) "Competing with Free: The Impact of Movie Broadcasts on DVD Sales and Internet Piracy", *Telecommunications Policy Research Conference*, September 29-October 1.
- A. Ghose, R. Telang and R. Krishnan (2005), "Welfare Implications of Secondary Electronic Markets", 38<sup>th</sup> Hawaiian International Conference on Information Systems (HICSS), IEEE Computer.
- A. Ghose, M D Smith, and R Telang (2004), "Price Elasticities and Social Welfare in Secondary Electronic Markets", *International Conference on Information Systems (ICIS, Washington DC)*, December. (Best paper nominee)
- A. Asvanund, R Krishnan and R Telang (2004), "Consumption Patterns and Optimal Tariffs: An Empirical Analysis of Cellular Voice and Data Services", *Austin Roundtable Mobility Conference*, Austin, TX. (March).
- T. Mukhopadhyay, U. Rajan and R. Telang (2004), "Competition between Internet Search Engines", *37th Hawaiian International Conference on System Sciences*, IEEE Computing.
- K. Kannan, R. Telang, H. Xu (2004), "Economic Analysis of the Market for Software Vulnerability Disclosure", *37th Hawaiian International Conference on System Sciences*, IEEE Computing.
- R. Krishnan, M. Smith, Z. Tang, R. Telang (2004), "Impact of Free-Riding on Peer to Peer Networks", *37th Hawaiian International Conference on System Sciences*, IEEE Computing. (Runner-up, Best Paper Award.
- A. Ghose, R. Telang, R. Krishnan (2003), "Do Secondary Electronic Markets Help of Hurt Suppliers?", *International Conference on Information Systems (ICIS, Seattle)* December.
- A. Ghose, M. Smith, R. Telang (2003), "The Welfare Impact of Used Good Market" *International Conference on Information Systems (ICIS, Seattle)*, December.
- R. Kraut, Shyam Sunder, Jim Morris, R Telang, M Cronin, (2002), "Markets for attention: Will postage for email help?", *Proceeding, Computer Supported Cooperative Work*, 206 215, New York: Association of Computing Machinery.
- R. Krishnan, M Smith, Z. Tang, R. Telang (2002) "The Virtual Commons: Why Free-riding can be tolerated in File Sharing Networks?" *International Conference on Information Systems (ICIS, Barcelona)*, December
- A. Asvanund, R. Krishnan, M. Smith, R. Telang (2003), "Intelligent Club Formation in P2P Networks", *Workshop on Information Technology and Systems (WITS, Seattle)*, December.

### Papers in Referred Conferences/Workshops Programs

- Rajiv Garg, Rahul Telang (2011), "Do Online Social Ties Help in Job Search?", WISE 2011 (Workshop on Information Systems and Economic), Shanghai.
- Anuj Kumar, Mike Smith, Rahul Telang (2010), "The broadcast window effect: Information Discovery and Cross-channel Substitution Patterns for Media Content", 6th Symposium on Statistical Challenges in eCommerce Research (SCECR'10)
- Rodrigo Belo, Pedro Ferreira, Rahul Telang (2010), Impact of Broadband in Schools: Evidence from Portugal, *National Bureau of Economic Research* (NBER), Cambridge, Massachusetts, July 23-24.
- Danaher, Brett, Samita Dhanasobhon, Michael D. Smith, Rahul Telang (2010), "Converting Pirates without Cannibalizing Purchasers: The Impact of New Digital Distribution Channels on Internet Piracy", *Industry Studies Annual Conference*, Chicago, May.
- Rajiv Garg, Michael Smith and Rahul Telang, (2010), "Information Diffusion on Online Social Networks", *Utah Winter conference on business*, Salt Lake City, UT, Feb 26-28.
- Rajiv Garg, Michael Smith and Rahul Telang, (2009), "Information Diffusion on Online Social Networks", *Conference on Information Systems and Technology (CIST)*, San-Diego, Nov 11-13.
- Anuj Kumar, Rahul Telang (2009), "Impact of Web Portals on Telephone Calls: An Empirical analysis", *Conference on Information Systems and Technology (CIST)*, San-Diego, Nov 11-13.
- Danaher, Brett, Samita Dhanasobhon, Michael D. Smith, Rahul Telang (2009), "Converting Pirates without Cannibalizing Purchasers: The Impact of New Digital Distribution Channels on Internet Piracy", *National Bureau of Economic Research* (NBER), Cambridge, Massachusetts, July 7.
- Danaher, Brett, Samita Dhanasobhon, Michael D. Smith, Rahul Telang. (2009), "Converting Pirates without Cannibalizing Purchasers: The Impact of New Digital Distribution Channels on Internet Piracy". *Society for Economic Research on Copyright Issues 2009 Congress (SERCI)*, San Francisco, California, July 9-10.
- Danaher, Brett, Samita Dhanasobhon, Michael D. Smith, Rahul Telang (2008), "Converting Pirates without Cannibalizing Purchasers: The Impact of New Digital Distribution Channels on Internet Piracy", *Workshop on Information Systems and Economics (WISE)*, Paris, France, December 13-14.
- Danaher, Brett, Samita Dhanasobhon, Michael D. Smith, Rahul Telang (2008), "Converting Pirates without Cannibalizing Purchasers: The Impact of New Digital Distribution Channels on Internet Piracy. *Web 2.0 Workshop on Economics, Law and Information Systems*, Manheim, Germany, December 11-12.
- Sasha Romanosky, Rahul Telang, Alessandro Acquisti (2008), "Do data breach disclosure laws reduce identity theft", *Forum on Financial Information Systems and Cybersecurity*, University of Maryland, May, 2008.
- Smith, Michael D., Rahul Telang (2008), "Piracy or Promotion? The Impact of the Broadband Internet Penetration on DVD Sales", *Winter Conference on Business Intelligence*, David Eccles School of Business, University of Utah, Salt Lake City, Utah, March 20-22.

- Yubao Yang, Rahul Telang (2008), "Effectiveness of Software Assurance Programs: Evidence from Common Criteria", *INFORMS annual meeting*, Washington DC, October-2008.
- Anuj Kumar, Rahul Telang (2008), "Product Customization and Customer Service Cost: An Empirical Analysis", *INFORMS annual meeting*, Washington DC, October-2008.
- Sasha Romanosky, Rahul Telang, Alessandro Acquisti (2008), "Do data breach disclosure laws reduce identity theft", *Workshop on Economics of Information Security*, Dartmouth College, June.
- Smith, Michael D., Rahul Telang (2007), "Piracy or Promotion? The Impact of the Broadband Internet Penetration on DVD Sales", *INFORMS Annual Meeting*, Seattle, Washington, November 4-7.
- Sasha Romanosky, Rahul Telang, Alessandro Acquisti (2007), "Do data breach disclosure laws reduce identity theft", *Workshop on Information Systems and Economics*, Montreal, Dec 8-9.
- Smith, Michael D., Rahul Telang. 2007. Piracy or Promotion? The Impact of the Broadband Internet Penetration on DVD Sales. *Third Symposium on Statistical Challenges in eCommerce Research* (SCECR'07), Stamford, Connecticut, May 18-19.
- Michael Smith, Rahul Telang (2007), "The impact of Broadband penetration on DVD sale", *Third Annual Statistical Challenges in Electronic Commerce Research Symposium*, School of Management, University of Connecticut, Hartford, May 18-19.
- Vineet Kumar, Rahul Telang, Tridas Mukhopadhyay (2007), Optimally securing interconnected information systems and assets", *Workshop on Economics of Information Security*, Pittsburgh, PA. June 26-28.
- Smith, Michael D., Rahul Telang. 2007. Competing with Free: The Impact of Movie Broadcasts on DVD Sales and Internet Piracy. *International Industrial Organization Conference* (IIOC), Savannah, GA, April 14-15.
- Michael D Smith, Rahul Telang (2006), "Competing with Free: The Impact of Movie Broadcasts on DVD Sales and Internet Piracy", *Workshop on Information Systems and Economics*, Evanston, IL. Dec 9-10.
- Ashish Arora, Chris Forman, Anand Nandkumar, Rahul Telang (2006), "Competition and Quality Restoration: An Empirical analysis of Vendor Response to Software Vulnerabilities", *Workshop on Information Systems and Economics*, Evanston, IL. Dec 9-10.
- Vineet Kumar, Rahul Telang, Tridas Mukhopadhyay (2006), "Optimally securing interconnected information systems and assets", *Workshop on Information Systems and Economics*, Evanston, IL. Dec 9-10.
- Smith, Michael D., Rahul Telang. 2006. An Analysis of Bittorrent Peer-to-Peer Networks and Internet Movie Piracy. *INFORMS Annual Meeting*, Pittsburgh, PA, November 5-8.
- Michael D Smith, Rahul Telang (2006), "Competing with Free: The Impact of Movie Broadcasts on DVD Sales and Internet Piracy", *INFORMS Annual Meeting*, Pittsburgh, PA, November 5-8.

- Michael D Smith, Rahul Telang (2006), "Internet Exchanges for Information Goods", *INFORMS Annual Meeting*, Pittsburgh, PA, November 5-8.
- Ramayya Krishnan, Michael D. Smith, Rahul Telang (2006), "Peer-to-Peer Technologies: A Research-Oriented Introduction", *INFORMS Annual Meeting*, Pittsburgh, PA, November 5-8.
- Ashish Arora, Chris Forman, Anand Nandkumar, Rahul Telang (2006), "Competition and Quality Restoration: An Empirical analysis of Vendor Response to Software Vulnerabilities", *Workshop on Economics of Information Security*, Cambridge, UK. June 26-28.
- Ashish Arora, Chris Forman, Anand Nandkumar, Rahul Telang (2006), "Competition and Quality Restoration: An Empirical analysis of Vendor Response to Software Vulnerabilities", 6<sup>th</sup> ZEW Workshop on The Economics of Information and Communication Technologies, Mannheim, Germany. June 7-9.
- Smith, Michael D., Rahul Telang. 2006. Competing with Free: The Impact of Movie Broadcasts on DVD Sales and Internet Piracy. *Telecommunications Policy Research Conference* (TPRC), Pittsburgh, PA, September 29-October 1.
- Michael D. Smith, Rahul Telang (2006), "Competing with Free: The Impact of Movie Broadcasts on DVD Sales and Piracy", *INFORMS Marketing Science Conference*, Pittsburgh, PA, June 8-10.
- Michael D Smith, Rahul Telang (2006), "Competing with Free: The Impact of Movie Broadcasts on DVD Sales and Piracy", *Second Annual Statistical Challenges in Electronic Commerce Research Symposium*, Carlson School of Management, University of Minnesota, Minneapolis, MN, May 22-23.
- Smith, Michael D., Rahul Telang. 2006. Competing with Free: The Impact of Movie Broadcasts on DVD Sales and Piracy. Economics of Information Systems Workshop, Department of Decision and Information Sciences, Warrington College of Business, University of Florida, Gainsville, FL, February 10-11.
- Ashish Arora, R Krishnan, R Telang, Y Yang (2005), "An Empirical Analysis of Vendor Response to Vulnerability Disclosure", *Workshop on Information Systems and Economics (WISE), Irvine, Dec 11-12.*
- Ram Gopal, Sudip Bhattacharjee, Kevin Lertwachara, Jim Marsden, R Telang (2005), "An Empirical Analysis of Impact of File Sharing on Music Album Survival" *Conference on Information Systems and Technology (CIST)*, San-Francisco, Nov 11-13.
- Rahul Telang, Sunil Wattal (2005), "Impact of Vulnerability Disclosure on Market Value of Software vendors: An Empirical Analysis, *INFORMS Annual Meeting*, San Francisco, Nov 11-13.
- Ghose, Anindya, Michael D. Smith, Rahul Telang. 2005. Internet Exchanges for Used Books: Welfare Implications and Policy Issues. *INFORMS Annual Meeting*, San Francisco, CA, November 13-15.
- Rahul Telang, Sunil Wattal (2005), "Impact of Vulnerability Disclosure on Market Value of Software Vendors: An Empirical Analysis, 4<sup>h</sup> Workshop on Economics and Information Security, Boston, June 1-3.

- Ashish Arora, R Krishnan, R Telang, Y Yang (2005), "An Empirical Analysis of Vendor Response to Vulnerability Disclosure", 4<sup>h</sup> *Workshop on Economics and Information Security*, Boston, June 1-3.
- Ashish Arora, R. Telang and Hao Xu (2005), "Optimal Time Disclosure of Software Vulnerabilities", 5<sup>th</sup> ZEW Conference: The Economics of Information and Communication Technologies, Mannheim, Germany. June 7-9.
- Rahul Telang (2005), "An Empirical Analysis of Cellular Voice and Data Services", *NET Institute Conference*, New York University, NY, April 1.
- Michael Smith, Rahul Telang (2005), "Incentives and Protocols for Self-Organizing Interest-Based Peer-to-Peer Networks." *NET Institute Conference*, New York University, NY, April 1.
- Ghose, Anindya, Michael D. Smith, Rahul Telang. 2005. Internet Exchanges for Used Books: Welfare Implications and Policy Issues. *International Industrial Organization Conference* (IIOC), Atlanta, GA, April 8-9.
- Ghose, Anindya, Michael D. Smith, Rahul Telang. 2005. Internet Exchanges for Used Books: Welfare Implications and Policy Issues. *Statistical Challenges in Ecommerce*, College Park, MD, May 22-23.
- Ashish Arora, Rahul Telang and Hao Xu (2004), "Optimal Time Disclosure of Software Vulnerabilities", *Conference on Information Systems and Technology*, Denver CO, October 23-24.
- Karthik Kannan, Rahul Telang (2004), "Economic Analysis of the Market for Software Vulnerability Disclosure", *Workshop on Economics and Information Security, Minneapolis,* May 13-15.
- Ashish Arora, Rahul Telang and Hao Xu (2004), "Optimal Time Disclosure of Software Vulnerabilities", *Workshop on Economics and Information Security, Minneapolis,* May 13-15.
- A Arora, A Nandkumar, R Krishnan, R Telang, Y Yang (2004), "Impact of Vulnerability Disclosure and Patch Availability An Empirical Analysis", *Workshop on Economics and Information Security, Minneapolis, Minneapolis, MN, May 13-15.*
- Michael D Smith, Rahul Telang (2004), "Internet Exchanges for Used Goods", *Statistical Challenges in Ecommerce*, University of Maryland, College Park, MD, May 22-23.
- Sunil Wattal, T Mukhopadhyay, R Telang (2004), "Measuring Personalization-Privacy Tradeoff an Empirical Investigation with Email Advertisements", *Statistical Challenges in Ecommerce*, University of Maryland, College Park, MD, May 22-23.
- Ashish Arora, R. Telang and Hao Xu (2005), "Optimal Policy for Software Vulnerabilities Disclosure", *16th Annual Decision and Information Sciences Workshop Economics in OM/IT*, Feb 25, University of Florida.
- A Ghose, R. Telang, R. Krishnan (2004), "Impact of Secondary Electronic Markets on Information Goods Suppliers", *Workshop on Information Systems and Economics (WISE, DC)*, Dec 11-12.
- Michael D Smith, Rahul Telang (2004), "Internet Exchanges for Used Goods", *Workshop on Information Systems and Economics (WISE, DC)*, Dec 11-12.

- Rahul Telang, Sunil Wattal (2004), "Impact of Vulnerability Disclosure on Market Value of Software Vendors: An Empirical Analysis", *Workshop on Information Systems and Economics (WISE, DC)*, Dec 11-12.
- A Ghose, M Smith and R Telang (2004), "Internet Exchanges for Used Books: An Empirical Analysis of Welfare Implications and Policy Issues", *MISRC/CRITO Symposium on Digital Divide*, Minneapolis, MN (August).
- Ghose, Anindya, Michael D. Smith, Rahul Telang. 2004. Internet Exchanges for Used Books: An Empirical Analysis of Welfare Implications and Policy Issues. *INFORMS Annual Meeting*, Denver, Colorado, October 24-27.
- Pei-Yu Chen, R. Telang, S Wattal (2003), "On Personalization Technology Adoption and Information Sharing in Digital Markets", *Workshop on Information Systems and Economics (WISE, Seattle)*, Dec 13-14.
- R Krishnan, M Smith, Z. Tang, R. Telang (2003) "The Virtual Commons: Why Free-riding Can Be Tolerated in File Sharing Networks?" *Workshop on Information Systems and Economics (WISE, Seattle)*, Dec 13-14.
- Ghose, R. Telang, R. Krishnan (2003) "Do Secondary Electronic Markets Help of Hurt Suppliers?" *INFORMS Marketing Science Conference, College Park MD*, June 12-15.
- Uday Rajan, Rahul Telang (2003) "Sequential Entry, Switching costs, and Strategic Overpricing", *INFORMS Marketing Science Conference 2003, College Park MD*, June 12-15.
- A Asvanund, R. Krishnan, M. Smith, R. Telang (2003) "Intelligent Club Formation in P2P Networks" *Workshop on Economic of P2P Networks, Berkeley*, June 4-5.
- Sunil Wattal, Rahul Telang, T Mukhopadhyay (2002) "Impact of Personalization on Product Price and Quality" with *Workshop on Information Systems and Economics (WISE Barcelona)*, Dec 13-14.
- Tridas Mukhopadhyay, Uday Rajan, Rahul Telang (2000) "Competition between Search engines", *Workshop on Information Systems and Economics (WISE, Brisbane)*, December.
- R. Telang, T. Mukhopadhyay, R. Wilcox (1999) "An Empirical Analysis of the antecedents of Internet Search Engines Choice," *Workshop on Information Systems and Economics (WISE, Charlotte NC)*, December.

### AWARDS

William Larimer Mellon Fellowship, Carnegie Mellon University, 1997.

Nominated for ICIS 2000 Doctoral Consortium, Brisbane, Australia.

Winner of the 2002 William W Cooper Doctoral Dissertation award.

Best Paper Award Nomination, The 37th Hawaii International Conference on System Sciences (HICSS-37), "The Virtual Commons: Why Free-Riding Can Be Tolerated in File Sharing Networks" (with Ramayya Krishnan, Zhulei Tang, and M smith), January 2004.

Best Paper Nomination, The 38<sup>th</sup> Hawaiian International Conference on Information Systems (HICSS), "Welfare Implications of Secondary Electronic Markets", with (R. Krishnan and A Ghose), January 2005.

Best Paper Nomination, International Conference on Information Systems (*ICIS*), "Price Elasticities and Social Welfare in Electronic Secondary Markets" with (A Ghose, and M. Smith), December 2004.

Runner up, Best published paper Award in Information Systems Research, "Internet Exchanges for Used Books", 2007.

Best Associate Editor Award, Information Systems Research, 2008.

The H J Heinz III College, Dean's Career Development Professorship. 2009.

Alfred P Sloan Industry Study Fellowship award (2009) (\$45,000).

NSF **Career Award** (2006) for the proposal "Securing Cyberspace: Role of Markets and Policy", CNS-0546009 (\$400,000)

Google-WPP marketing award (2010) (\$65,000) with Mike Smith.

The Marketing Science Institute and the Wharton Interactive Media Initiative (WIMI) award (2010), \$9000 (with Mike Smith)

### **OTHER GRANTS**

Amazon.com Research Grant, March 2003. (\$3000)

Berkman Faculty Development Award, April 2004. (\$2500)

NET institute award, 2004, 2005 (\$12,500, \$2500)

The Center for the Analysis of Property Rights and Innovation (CAPRI) – award 2006, 2008 (\$7500, \$10000) (with Michael Smith)

Cylab Grants - 2004, 2005, 2006, 2008 (\$55,000, \$28000, \$28000, \$30,000)

CMU-Portugal grant - 2009 (\$150,000). (with Pedro Ferreira).

### **DOCTORAL STUDENT ADVISING**

ByungJoon Yoo, Dissertation Committee, Graduate School of Industrial Administration, Carnegie Mellon University, Graduated 2003. (Hong Kong University of Science and Technology)

Anindya Ghose, Dissertation Committee, Graduate School of Industrial Administration, Carnegie Mellon University, Graduated 2004. (Stern School, New York University)

Hao Xu, Dissertation Committee, Heinz School, Carnegie Mellon University. (Working in industry)

Atip Asvanund, Dissertation Committee, Heinz School, Carnegie Mellon University (Working in industry)

Zhulei Tang, Dissertation Committee, Tepper School of Business, Carnegie Mellon University (Purdue University)

Sunil Wattal, Dissertation Committee, Carnegie Mellon University (Temple University)

Yubao Yang, (Chair), The Heinz School, Carnegie Mellon University. (Industry)

Anand Nandkumar, Dissertation Committee, The Heinz School, Carnegie Mellon University. (Indian School of Business)

Gaurav Kataria, Dissetation Committee, The Heinz School, Carnegie Mellon University. (Booze Allen Hamilton)

Seung Il Kim (Dissertation Committee), Tepper School of Business, (Singapore National University)

Anuj Kumar, 5th year student, Heinz School, Carnegie Mellon University. (Chair)

Sasha Romanosky, 5<sup>th</sup> year student, Heinz School, Carnegie Mellon University.(Committee)

Rajiv Garg, 3rd year student, Heinz School, Carnegie Mellon University. (Chair)

Daegon Cho, First year student, Heinz School, Carnegie Mellon University.

### MASSTERS THESIS, PROJECTS AND INDEPENDENT STUDIES

Danial Ranza (2010), "Profiling Attacker Behavior using Vulnerability Metrics", Masters Thesis (MSISPM).

Mike Fecher (2009), "IPv6 Adoption Strategy" MSIT Masters' thesis.

David Dewey, Samita Dhanasobhon, Steve Gee, Stoyan Arabadijyski, Sumiko F. Hossain, "Analyzing Internet Data for Competitive Advantage," MISM IS Project, August 2004.

Sarvesh Bagla, Munjal Kapadia, "Simulating the Performance of Peer-to-Peer Networks," Chair, Masters Thesis, Information Networking Institute, Graduated May 2003.

# INVITED TALKS

1. Government Accounting Office – IT and productivity, November 2001.

- 2. University of California, Davis Internet Exchanges for Used Books: An Empirical Analysis of Product Cannibalization and Welfare Impact, November 2004.
- 3. University of Texas, Austin; Mccombs School of Management An Empirical Analysis of Vendor Response to Software Vulnerability Disclosure Policy, Feb 2006
- 4. University of Maryland, RH Smith School of Business An Empirical Analysis of Vendor Response to Software Vulnerability Disclosure Policy, March 2006
- 5. American University, Koggod School of Management An Empirical Analysis of Vendor Response to Software Vulnerability Disclosure Policy, March 2006
- 6. University of Pittsburgh, Katz School of Business An Empirical Analysis of Vendor Response to Software Vulnerability Disclosure Policy, March 2006.
- 7. Georgia Tech University, School of Management Competition and Quality Restoration: An Empirical analysis of Vendor Response to Software Vulnerabilities, Oct 2006.
- 8. University of Minnesota, Carlson School of Management Competition and Quality Restoration: An Empirical analysis of Vendor Response to Software Vulnerabilities, Nov 2006.
- 9. New York University, Stern School of Management Empirical Analysis of Mobile Voice and SMS service: A Structural Model, Jan 2007
- 10. Cylab Seminar Series, Carnegie Mellon University Optimal Policy of Software Vulnerability Disclosure.
- 11. University of Maryland, Dept of Economics Competition and Quality Restoration: An Empirical analysis of Vendor Response to Software Vulnerabilities, Mar 2007.
- 12. University of Texas at Dallas, School of Management Empirical Analysis of Mobile Voice and SMS service: A Structural Model, October 2007.
- 13. The Ohio-State University, School of Business Competition and Quality Restoration: An Empirical analysis of Vendor Response to Software Vulnerabilities, October 2008.
- 14. Invited Talk: Economics of Information Security, Cylab-Tokyo, 2007.
- 15. Purdue University, Krannert School of Management Product Customization and Customer Service Cost: An Empirical Analysis. February 2008.
- 16. Temple University, Fox School of Business Competing with Free: Impact of TV Broadcast on DVD Sales and Internet Piracy, March 2008.
- 17. Arizona State University Converting Pirates without Cannibalizing Purchasers: The Impact of New Digital Distribution Channels on Internet Piracy, Feb 2009.
- University of California, Paul A Mirage School of Business, Converting Pirates without Cannibalizing Purchasers: The Impact of New Digital Distribution Channels on Internet Piracy, Feb 2009.

- 19. University of Washington, Foster School of Business, Impact of broadband on School performance: Evidence from Portugal, Feb 2010.
- 20. University of Pennsylvania, The Wharton School, Impact of broadband on School performance: Evidence from Portugal, March 2010.

### MEDIA MENTION

The New York Times, Mention of used book research in Hal Varian's column

The Washington Post, Mention of disclosure policy work in Brian Krebs's security blog.

SecurityFocus.com An article and interview on our research on how vulnerability disclosures hurt software vendors.

The Pittsburgh post gazette on vulnerability disclosure.

#### PROFESSIONAL MEMBERSHIP AND ACTIVITIES

Editorial Board, Journal of Accounting and Public Policy.

Editorial Board, Journal of Law and Policy for the Information Society.

Associate Editor - Management Science. June 2006- (Ad-hoc AE, June 2005-2006)

Associate Editor – Information Systems Research (Feb 2006 – Dec 2009)

Associate Editor – ICIS 2006 (Economics of IS track), ICIS 2008 (Economics of IS, Featured Industries), ICIS 2009 (Information Security and Privacy)

Associate Editor - PACIS 2009,

Co-chair of the "eBusiness Management" Track in the 5th International Conference on eCommerce" held in Pittsburgh, PA, October 2003.

Program Co-Chair, CIST, INFORMS, Pittsburgh, November 2006.

Program Co-chair, Workshop on Economics and Information Security, Pittsburgh, June 2007.

Program Committee, CIST, INFORMS, 2003-

Program Committee, Workshop on Economics and Information Security, 2004-

Program Committee, Conference on eCommerce (ICEC), 2006-2007.

Program Committee, Workshop on Economics and Information Security, 2004-

Session Chair in the workshop "Revolutionary Strategies and Tactics in Research Design and Data Collection for eBusiness Management Research", held in Pittsburgh PA, October 2003.

Session Chair in the Workshop "Economic of P2P Networks" held in UC Berkeley, May 2003,

Session Chair in the Workshop "Workshop on Economics of Information Systems", Dec 2005

Session Chair in the Workshop "Workshop on Economics of Information Systems", Dec 2007,

Session Chair in the Workshop "Workshop on Economics of Information Security", June 2005.

Session Chair in the Workshop "Workshop on Economics of Information Security", June 2008.

Member of American Information Systems, INFORMS.

Carnegie Mellon University Representative, Institute for Infrastructure Protection (I3P),

Participant in NSF panel on Future Internet Design, June 16-18, 2008.

Participants in Senate Business and Economics Forum on Cyber Security Research and policy, October 15 2008, Washington DC.

Participant in Cyber Leap Year Summit, August 17-19, 2009, Arlington, VA.

Reviewer – American Economic Review, Management Science, Marketing Science, Information System Research, MIS Quarterly, Journal of Business and Economic Statistics, Journal of Management Information Systems, NSF review papers, and numerous conferences.

### **SERVICE**

Faculty Advisor, Masters of Information Systems Management Program, 2002 - 2004.

Member, Ph.D. Committee, 2004 - .

Member, Faculty Recruiting Committee, 2002-2003, 2008.

Member, Masters of Information Systems Management Program, 2003-2004.

Member, IT messaging and IT management recruitment committee (2008)

Member, SETChange, IS recruiting Committee (2008, 2009).

Member, MISM Academic Action Committee (2010)

Member, Senate University Libraries Advisory Committee (starting Fall 2010).