

Jungwoo Ryoo, Ph.D., CISSP

Member, IEEE-Computer Society
163 LRC 3000 Ivyside Park
Altoona, PA 16601
(814) 949-5243 • jryoo@psu.edu
<http://www.personal.psu.edu/jxr65/>

Career Objectives

To obtain a tenured faculty position in a well-established institution where I can apply my academic knowledge and industrial experience to teach undergraduate and graduate courses, conduct research, and help the growth of that institution and the community it serves.

Areas of Expertise (Research and Teaching)

- **Software Engineering:** core areas of SE but in particular
 - Software architecture, especially analysis and design using viewpoints and architectural patterns
 - Formal and conceptual modeling, and specification
 - Requirements engineering
- **Information Assurance and Security:** software security, network/cyber security, and risk management (specializing in risk assessment)
- **Computer Networking:** Next Generation Networking (NGN) protocols, algorithms, and management
- **Computer Science:** typical computer science topics (object-oriented software engineering, data structures, programming languages, algorithms, operating systems, databases, hardware architectures, networking, and telecommunications)

Education

- Ph.D. in Computer Science (August 2005), Department of Electrical Engineering and Computer Science, University of Kansas, Lawrence, KS (GPA: 4.0/4.0)
Dissertation Title: *AVDL: An XML-based Software Architecture View Description Language* (Dissertation Supervisor: Professor Hossein Saiedian)
- M.S. in Computer Science (December 1998), Computer Science and Telecommunications, University of Missouri, Kansas City, MO (GPA: 3.8/4.0)
Thesis Title: *A Mid-Model to Establish Traceable Requirements between Object-Oriented Use Cases and Object-Oriented Requirements Models*
- B.S. in Computer Science (December 1996), Computer Science and Telecommunications, University of Missouri, Kansas City, MO (GPA: 3.4/4.0)

Industrial and Academic Work Experience

- **Assistant Professor of Information Sciences and Technology** (7/2005–Present)
The Pennsylvania State University-Altoona, Pennsylvania, Division of Business and Engineering

Teaches courses on Information Technology and conducts research on Software Architecture, Software Security, Network Security, and Risk Assessment.

Courses taught: IST 451 (Network Security), IST 240 (Introduction to Computer Languages), IST 230 (Language, Logic, and Discrete Mathematics), IST 220 (Networking and Telecommunications), IST 210 (Organization of Data), CSE260/CMPSC360 (Discrete Mathematics), SRA 111 (Introduction to Security and Risk Analysis), SRA 221 (Fundamentals of Information Security), CMPSC203 (Principles of Programming with Business Applications), MIS204 (Introduction to Business Information Systems), and MIS120 (Micro Operating Systems)

- **Coordinator of the B.S. Program in Security and Risk Analysis at Penn State Altoona** (6/2008–Present)
- **IT Specialist** (9/2004–6/2005)
IBM Corporation, Overland Park, Kansas, Global Services.

Designed and developed a suite of network (security) alarm management software as a lead developer in multi-year, multi-million dollar projects.

- **Software Engineer** (1/2003–9/2004)
Sprint Corporation, Overland Park, Kansas, Network Capabilities Development, Information Technology Services.

Designed and developed an automatic trouble-ticket generation system, a network (security) diagnostic system, and a project forecasting system.

- **Software Architect** (1/2001–12/2002)
Sprint Corporation, Overland Park, Kansas, Network Configuration System Development, Long Distance Division.

Developed architectural blueprints; analyzed, designed, and documented software architectures addressing user concerns including security.

- **Instructor** (1/1999–12/2000)
Computer Science and Telecommunications, University of Missouri, Kansas City, MO.
Courses taught: CS481 (Advanced Computer Architecture, Winter 2000, Summer 2000, and Fall 2000), CS291 (Discrete Mathematics, Fall 1999), and CS281 (Introduction to Computer Architecture, Winter 1999 and Summer 1999).

- **Research Assistant** (1-1999–12/2000)
Computer Science and Telecommunications, University of Missouri, Kansas City, MO.

- **Research/Teaching Assistant** (1/1997–12/1998)
Computer Science and Telecommunications, University of Missouri, Kansas City, MO.

Publications

Journal Articles

1. Jungwoo Ryoo, Phillip Laplante, and Rick Kazman, In Search of Architectural Patterns for Software Security, *IEEE Computer* **42(6)**: 98-100, June 2009.
2. Jungwoo Ryoo, Angsana Techatassanasoontorn, Dongwon Lee, Security Education Using Second Life, *IEEE Security and Privacy* **7(2)**: 72-75, March/April 2009.
3. Seungjae Shin, Jerry Cunningham, Jungwoo Ryoo, and Jack Tucci, Authentication and Protection for E-finance Consumers: the Dichotomy of Cost versus Ease of Use, *International Journal of Electronic Finance*, **3(1)**: 31-45, 2009.
4. David Janzen and Jungwoo Ryoo, Improving Evidence-Based Software Engineering Education through a Community-Driven Web Database, *Journal of Systems and Software*, **82(4)**: 563-570, April 2009 (ISSN: 0164-1212).
5. Hossein Saiedian, Mohamad Anan, and Jungwoo Ryoo. An Architecture-Centric Software Maintainability Assessment Using Information Theory, *Journal of Software Maintenance and Evaluation: Research and Practice*, **21(1)**: 1-18, January/February 2009.
6. Jungwoo Ryoo, Tae H. Oh, Seungjae Shin, and Young B. Choi, A Comprehensive Readiness Assessment Framework for Identity Theft Safeguards in Web-based Electronic Government Systems, *Electronic Government, an International Journal*, **6(1)**: 19-40 (2009).
7. Jungwoo Ryoo, Young B. Choi, Tae H. Oh, and Gregory K. Corbin, A Multi-Dimensional Classification Framework for Developing Context-Specific Wireless Local Area Network Attack Taxonomies, *International Journal of Mobile Communications*, **7(2)**: 253-267 (2009).
Gregory Corbin is a former student.
8. Charlotte E. McConn, Jungwoo Ryoo, and Tulay Girard, Assessing the Computer Information Systems Security: Three Case Studies of Local Governments in Central Pennsylvania, *Journal of International Business Research*, **6(1)**: 55-75, 2007.
9. Jungwoo Ryoo and Young B. Choi, A Comparison and Classification Framework for Disaster Information Management Systems, *International Journal of Emergency Management on IT*, **3(4)**: 264-279, 2006.
10. Jungwoo Ryoo and Hossein Saiedian, AVDL: A Highly Adaptable Architecture View Description Language, *Journal of Systems and Software*, **79(8)**: 1180-1206, 2006.
11. Jungwoo Ryoo and Hossein Saiedian, A Framework for Classifying and Developing Extensible Architectural Views, *Information and Software Technology*, **48(7)**: 456-470, 2006.
12. Jungwoo Ryoo and Hossein Saiedian, A Formal Language Dedicated to Describing Architectural Views, *International Journal of Computer and Information Science*, **5(4)**: 246-255, 2004.

J. Ryoo's Professional Vitae

Journal Articles under Review

1. Angsana Techatassanasoontorn, Jungwoo Ryoo, and Dongwon Lee, Virtual World-based Security Learning Using Second Life: Design and Evaluation, under review for publication in *Journal of Database Management*.

Book Chapters

1. Jungwoo Ryoo, Young B. Choi, and Tom Oh, Security and Privacy in Mobile Telemedicine, Mobile Telemedicine: A Computing and Networking Perspective, Auerbach Publications, CRC Press, 2008 (ISBN-10: 1420060465).

Book Chapters under Review

1. Jungwoo Ryoo, Architecture Description Languages, Encyclopedia of Software Engineering, Auerbach Publications, CRC Press, 2010 (ISBN-10: 1420059777).

Conference Proceedings

1. S. Anwar and J. Ryoo, Integration of Multidisciplinary Security and Risk Analysis Undergraduate Program Components into a Four-Year Electromechanical Engineering Technology Program, In *Proceedings of the IEEE Frontiers in Education (FIE 2009)* Conference, San Antonio TX, October 18-21, 2009.
2. C. McConn and J. Ryoo, Using Geographic Information Systems in an Information Systems Security Readiness Assessment, In *Proceedings of International Conference on Business, Economics, and Information Technology (ICBEIT 2009)*, Nagoya Japan, March 9-10, 2009.
3. J. Ryoo and P. Laplante, Architectural Security, In *Proceedings of the 42nd Hawaii International Conference on Systems Sciences (HICSS 2009): Trust and Dependability Workshop*, HI, January 5, 2009.
4. S. Shin, J. Cunningham, J. Ryoo, and J. E. Tucci. A Study of Two-factor Authentication against Online Identity Theft. In *Proceedings of the 39th Annual Meeting for Decision Science Institute*, Baltimore, MD, November 2008.
5. J. Ryoo and S. Chun, A Behavior-Centric Mobile-Device-Resident Malware Detection Method Using Ontology, In *Proceedings of the 2008 U.S. Korean Conference on Science, Technology, and Entrepreneurship (UKC 2008)*, KSEA, San Diego CA, August 2008.
6. J. Ryoo and T. H. Oh, Teaching IP Encryption and Decryption Using the OPNET Modeling and Simulation Tool In *Proceedings of the 12th Colloquium for Information Systems Security Education*, Dallas, TX, June 2008.
7. J. Ryoo, F. Fonseca, and D. Janzen. Teaching Object-Oriented Software Engineering through Problem-based Learning in the Context of Game Design, In *Proceedings of the 21st IEEE-CS Conference on Software Engineering Education and Training (CSEE&T)*, Charleston, SC, April 2008.

J. Ryoo's Professional Vitae

8. D. Janzen and J. Ryoo, Seeds of Evidence: Integrating Evidence-Based Software Engineering Instruction, In *Proceedings of the 21st IEEE-CS Conference on Software Engineering Education and Training (CSEE&T)*, Charleston, SC, April 2008.
9. Y. B. Choi, J. Ryoo, H. L. Reif, and H. E. Lim, Meeting Growing Demands of Standardization Education in Information and Communications Technology Industry, In *Proceedings of the 38th Southeast Decision Sciences Institute (SEDSI) Conference*, Orlando, FL, February 2008.
10. J. Ryoo. Behavior-based Malware Detection for Mobile-Device Resident Malware, Invited Talk, In *Proceedings of the 2007 Korean Computer Scientists and Engineers Association (KOCSEA) in America Technical Symposium*, University of Southern California, Los Angeles, CA, December 2007.
11. J. Ryoo, T. Oh, S. Shin, and Y. B. Choi, An Analysis of Identity Theft Safeguards in the U.S. E-Government Systems, In *Proceedings of the 35th Research Conference on Communication, Information, and Internet Policy (Telecommunications Policy Research Conference)*, George Mason University, Arlington, VA, September 2007.
12. T. Oh and J. Ryoo, Modeling and Simulation of Wireless Local Area Network (WLAN) Security Using a New Multi-Dimensional Threat Taxonomy, In *Proceedings of 2007 US-Korea Conference on Science, Technology, and Entrepreneurship (UKC-2007) Information Technology Symposium*, Washington D.C., August 2007.
13. S. Anwar, J. Ryoo, H. Dhillon, and D. Barnes, An Interdisciplinary Approach to Information Systems Security Education: a Case Study, In *Proceedings of the 114th Annual American Society for Engineering Education (ASEE) Conference*, Honolulu, Hawaii, June 2007.
14. C. E. McConn, J. Ryoo, and T. Girard, Assessing Information Systems Security within Local Governments: a Pilot Study for Central Pennsylvania, accepted for publication in *Proceedings of the 2007 International Guam Conference on Business, Economics, and Information Technology*, Tumon, Guam, March, 2007.
15. J. Ryoo and C. E. McConn, Developing a Community Outreach Program for Information Assurance, accepted for publication in *Proceedings of the Southeast Decision Science Institute (SEDSI) Thirty Seventh Meeting*, Savannah, GA, February, 2007.
16. J. Ryoo, Software Security from an Architectural Perspective, Invited Talk, *2006 Korean Computer Scientists and Engineers Association (KOCSEA) in America Technical Symposium*, Arizona State University, Tempe, Arizona, December 2006.
17. T. Girard, M. O'Connor, and J. Ryoo, Consumer Patronage Intentions in the Context of Internet Security and Perceived Risk, In *Proceedings of the Fourteenth International Conference on Telecommunications Systems-Modeling and Analysis (ICTSM 2006)*, pages 314-315, Berks, Pennsylvania, USA, October 2006.
18. S. Jang and J. Ryoo, Software Security Verification with Formal Method Tools, In *Proceedings of the 2006 US-Korea Conference on Science, Technology, and Entrepreneurship (UKC-2006)*, Information Technology Symposium, Teaneck, New Jersey, USA, August 2006.
19. J. Ryoo, E. Park, and S. Osagie, Measuring Internet Security Readiness: A Study of Household Behavior, In *Proceedings of the Sixteenth Biennial Conference of the International Telecommunications Society*, Beijing, China, June 2006.

J. Ryoo's Professional Vitae

20. J. Ryoo and Y. Choi, Recent Developments in Telecommunications Technologies for Disaster Information Management Systems, In *Proceedings of the Fourth Annual Conference on Telecommunications and Information Technology*, pages 374–379, Mandalay Bay Hotel, Las Vegas, Nevada, USA, March, 2006.
21. J. Quint and J. Ryoo, An XML Document-centric Architecture, In *Proceedings of the Southeast Decision Science Institute (SEDSI) Thirty Sixth Meeting*, pages 271–279, Wilmington, NC, February, 2006, SEDSI.
22. J. Ryoo, A Taxonomy of Software Architecture Specification Methods, In *Proceedings of the Southeast Decision Science Institute (SEDSI) Thirty Fifth Meeting*, Raleigh, NC, February, 2005, SEDSI.
23. J. Ryoo and H. Saiedian, A Refinement-based Taxonomy of Architectural Views, In *Proceedings of the Second International Association for Computer and Information Science (ACIS) Conference on Software Engineering Research, Management, and Applications*, pages 118–122, Los Angeles, CA, May, 2004, ACIS.

..... **Intelligent Software Agent Research**

24. J. Ryoo, S. Tak, D. Lee, J. Stach, and E. K. Park, Visualizing Large-Scale Distributed Artificial Intelligence (DAI) Systems, In *Proceedings of the ACM Workshop on New Paradigms in Information Visualization and Manipulation (NPIVM'00)*, McLean, VA, November 2000, ACM.
25. C. Lee, J. Ryoo, S. Tak, D. Lee, C. Oh, J. Kim, J. Stach, and E. K. Park, Simulating Software Agent Colonies in Large Scale Distributed Artificial Intelligence (DAI) Networks, In *Proceedings of the Center for Architectures for Data-driven Information Processing (CADIP) Research Symposium*, Baltimore County, MD, September 2000, CADIP.

..... **Master's Thesis Research**

26. Y. Lee, J. Ryoo, J. Stach, and E. K. Park, Composing Requirements for Goal-Oriented System Behaviors Using an Extended Form of Use Cases, In *Proceedings of the IEEE Workshop on Application-Specific Systems and Software Engineering (ASSET'00)*, pages 91–96, Richardson, Texas, March 2000, IEEE.
27. J. Ryoo, J. Stach, and E. K. Park, Extension and Partitioning of Use Cases in Support of Formal Object Modeling, In *Proceedings of the IEEE Workshop on Application-Specific Systems and Software Engineering (ASSET'99)*, pages 238–243, Dallas, Texas, March 1999, IEEE.

Posters

1. A. Techatassanasoontorn, J. Ryoo, D. Lee, T. Davenport, The Design and Evaluation of a Virtual World-based Learning Environment: Information Security Learning Using Second Life, In *Proceedings of the 4th International Conference on Design Science Research in Information Systems and Technology (DESRIST 2009)*, Philadelphia PA, May 2009.
2. J. Ryoo, D. Lee, and A. Techatassanasoontorn, Immersive Security Education Environment (I-SEE) Using Second Life, In *Proceedings of the ACM SIGCSE 2008 Technical Symposium on Computer Science Education*, Portland, OR, March 2008.

Externally Funded Projects and Grants

Funded and Ongoing

- September 2008-October 2011, *An Immersive Security Education Environment (I-SEE) Using Second Life*, National Science Foundation, Course Curriculum, and Laboratory Improvement (CCLI) Program, \$399,900 (co-PI).
- January 2008-March 2009, *Assessing Computer Information Systems Security within Local Governments in Rural Pennsylvania*, Center for Rural Pennsylvania Research Grant, \$49,989 (PI).

Completed

- August 2007-October 2008, *Engaging and Interactive Security Education through Second Life*, Association for Computing Machinery Special Interest Group on Computer Science Education (ACM SIGCSE) Special Projects Grant, \$4,829 (PI).

Submitted

- March 2009, *Curriculum Integration of a Next Generation Engineering Team Structure (NGETS) for Massively Distributed Collaboration*, Hewlett Packard Technology for Teaching Grant, \$240,000 (PI).

Travel Grants

- March 2008, Teaching Enrichment Travel Grant, Schreyer Institute for Teaching Excellence, \$500.
- December 2006/2007, Invited Talk to Korean Computer Scientists and Engineers Association (KOCSEA) in America Technical Symposium, Korea-U.S. Science Cooperation Center Honorarium, \$400.
- December 2006/2007, Participation in U.S.-Korea Conference on Science, Technology and Entrepreneurship Information Technology Symposium, Korea-U.S. Science Cooperation Center Honorarium, \$300.
- September 2006, Participation in Object-Oriented Programming, Systems, Languages, and Applications Conference (OOPSLA), Association for Computing Machinery Special Interest Group in Programming Languages Educator Scholarship, \$600.

Internally Funded Projects and Grants

Completed

- June-December 2008, *A User-Friendly Design for Home Network Intrusion Detection Systems*, Penn State Altoona President's Fund for Research, \$700.
- January 2008, *Immersive Security Education Environment (I-SEE)*, Penn State Altoona Research Development Grant, \$1800.
- January 2008, *Center for Information Systems Security Assessment Studies and Research (CIS-SASR) at Penn State Altoona, Phase III*, Penn State Altoona Chancellor's Development Fund, \$ 1500.
- June-December 2008, *A User-Friendly Design for Home Network Intrusion Detection Systems*, Penn State Altoona President's Fund for Research, \$992.
- January-December 2008, *Immersive Security Education Environment (I-SEE) Using Second Life*, Penn State Altoona Research Development Grant, \$1,800.
- January-December 2007, *Community Outreach: Computer Security Research Institute at Penn State Altoona: Phase Two*, Penn State Altoona Chancellor's Development Fund Grant, \$2,000.
- January-December 2007, *The Role of Satisfaction and Trust in Consumer Online Purchase Intention*, Penn State Altoona Chancellor's Development Fund Grant, \$4,000
- February 2007, *A Risk Assessment Framework for Embedded Device-Resident Malware* Penn State Altoona Undergraduate Research Award, \$500.
- January-December 2006, *Community Outreach: Computer Security Research Institute at Penn State Altoona*, Penn State Altoona Chancellor's Development Fund Grant, \$3,000.
- 2005-2006, *Modeling Wireless Local Area Network (WLAN) Attacks Using a Multi-Dimensional Threat Taxonomy*, Penn State Altoona Undergraduate Research Award, \$500.
- 2005-2006, *A Classification and Comparison Framework for Wireless Networking Security Software*, Penn State Altoona Research Development Grant, \$2000.
- Fall 2006, *Information Assurance for Local Governments: Raising Awareness, Providing Education, and Implementing Policies through Active Assessment (National Science Foundation Cyber Trust proposal)*, Penn State Altoona Collaborative Research Proposal Writing Grant, one course release.

Travel Grants

- February 2008, Participation in ACM SIGCSE 2008 Technical Symposium on Computer Science Education, Portland, OR, March, 2008, Teaching Enrichment Travel Grant, Schreyer Institute for Teaching Excellence.

Teaching

Certification

- Certificate of Completion, the Course in College Teaching, the Pennsylvania State University.

Evaluations

The following statistics are based on the students' rating of the overall quality of the instructor in the scale of 0 (lowest) to 7 (highest).

- Spring 2009
 - SRA 111 (Introduction to Security and Risk Analysis): **6.47**
 - IST 240 (Introduction to Computer Languages): 5.88
- Spring and Fall 2008
 - CMPSC 360 (Discrete Mathematics): **6.33**
 - IST 210 (Organization of Data): **6.05**
 - IST 240 (Introduction to Computer Languages): 5.94
 - IST 220 (Networking and Telecommunications): **6.24**
 - SRA 221 (Fundamentals of Information Security): 5.64
- Spring and Fall 2007
 - IST 220 (Networking and Telecommunications): 5.95
 - IST 240 (Introduction to Computer Languages): 5.75
 - IST 451 (Network Security): **6.14**
 - MIS 204 (Introduction to Business Information Systems): 5.88
 - IST 230 (Language, Logic, and Discrete Mathematics): 5.6
 - IST 220 (Networking and Telecommunications): **6.3**
- Spring and Fall 2006
 - IST 230 (Language, Logic, and Discrete Mathematics): 5.60
 - IST 220 (Networking and Telecommunications): 5.61
 - CSE 260 (Discrete Mathematics): **6.33**
 - MIS 120 (Micro Operating Systems): 5.75
 - CMPSC 203 (Principles of Programming with Business Applications): **6.42**

Supervision of Undergraduate Research

- Gensamer, Leann and Taylor Davenport. *A User-Friendly Design for Home Network Intrusion Detection Systems*. Manuscript in Progress, Student hired through the Presidents Fund for Research, June 2008.
- Gildea, Sarah and Min Kyung Kim. *User-Friendly Security*. Paper presented at Undergraduate Research Fair, Penn State Altoona, April 2008. Students from IST 220, Fall 2007.
- Lee, Justin and Michael Lenhart. *A Risk Analysis Framework for Mobile Device-Resident Malware*. Paper presented at Undergraduate Research Fair (won the 1st prize in Engineering category), Penn State Altoona, April 2007, and at Behrend College-Sigma Xi Undergraduate Research and Creative Accomplishment Conference, Penn State Erie, April 2007. Students from CMPSC 203, Fall 2006, and IST 496, Spring 2007.
- Rocus, Ben, Nick Pellegrine, Steve Woloson, and Josh Boese. *Novell Zenworks Removal and Windows Server Update Services Installation*. Community Service Learning Project for Central Cambria High School, Ebensburg PA, April 2006. Students from IST 220, Spring 2006.
- Holt, Mathew, Mathew Martin, and Michael Selia. *A Study on Wi-Fi Hotspots*. Paper presented at Undergraduate Research Fair, Penn State Altoona, April 2006. Students from IST 220, Spring 2006.
- Bellew, Joseph, Gregory Corbin, Troy Miller, and Mathew Milko. *A Security Comparison of Three Major Wireless Technologies*. Paper presented at Undergraduate Research Fair, Penn State Altoona, April 2006. Students from IST 220, Spring 2006.
- Corbin, Gregory. *Modeling Local Area Network Attacks Using a Multi-Dimensional Threat Taxonomy*. Project funded through Penn State Altoona Undergraduate Research Award, December 2005. Student became a co-author of Dr. Ryoo's published manuscript, A Multi-Dimensional Classification Framework for Developing Context-Specific Wireless Local Area Network Attack Taxonomies.
- Seth, Travis. *A Security Vulnerability Analysis of Access Control Systems for Web-based Content Management Systems*. Paper written for IST 220, Spring 2006. Student became a co-author of candidate's manuscript in progress, A Security Vulnerability Analysis of Access Control Systems for Web-Based Content Management Systems.

Supervision of Graduate Research

- External thesis adviser for Chnag-Nam Oh, *Development of User-Created Content Learning Models Based on Cooperative Learning*. Master of Education Thesis, Department of Computer Education, Seoul National University of Education, December 2008-present.

Outreach Activities

- Principal Investigator, Funded research project to assess information systems security within local governments in rural Pennsylvania, January 2008-present.

This project was sponsored by the Center for Rural Pennsylvania research grant.

- General Chair, Second workshop on Local Government Information Systems Security Readiness, Altoona, Pennsylvania, May 2008.

This event was sponsored by the Southern Alleghenies Planning and Development Commission (SAPDC).

- General Chair, First workshop on Local Government Information Systems Security Readiness, Altoona, Pennsylvania, September 2007.

- Presenter, Information Systems Security for Small and Medium-sized Organizations, Lunch and Learn session, Tyrone Area Chamber of Commerce, March, 2007.

- Coordinator, Information Systems Security Certificate Program, May 2006-present.

Developed an 18-credit program intended for the local business community, government, and nonprofit organizations, designed to provide information systems security education.

- Guest Speaker, Internet Security, Pennsylvania State Association of Boroughs 97th Annual Conference & Exhibition, Seven Springs Mountain Resort, Pennsylvania, June 2008.

- Presenter, Workshop on Computer Security for the members of Blair County Chamber of Commerce, Devorris Center, August 2006.

- Presenter, Threats and Opportunities in IT Security, Colloquium Series, Penn State Altoona, October 2006.

- Presenter, Information Systems Security: A Layered Approach, LinkUp and Learn Technology Conference, Link Computer Corporation, Altoona PA, October 2006.

- Presenter, Recent Developments in Wireless Network Security, Colloquium Series, Penn State Altoona, November 2005.

- Presenter, Web-Based Teaching Aids, 11th Annual Technology Conference, Montgomery County Community College, Philadelphia PA, October 2005.

Honors and Awards

- The University-wide IST Faculty Award, College of IST, The Pennsylvania State University, May 2009.
- Outstanding Achievement in Research and Creative Activity, Penn State Altoona, April 2009.
- President, Sprintmasters (a local Sprint chapter of Toastmasters International), May 2004–December 2004.
- Competent Toastmaster (CTM), Toastmasters International, March 2004.
- Most Effective Employee (an honor awarded to the top 10 percent performers in the entire company), Sprint Corporation, March 2004 and 2002.
- Sprint Values Excellence (SVE) award, Sprint Corporation, December and January 2003.
- First Officer, Student Council, Computer Science and Telecommunications, University of Missouri, Kansas City, MO, January 1998.
- Outstanding Senior Undergraduate Student of the Year Award, Computer Science and Telecommunications, University of Missouri, Kansas City, MO, May 1997.
- President, Korean Student Association, University of Missouri, Kansas City, MO, September 1995–September 1996.

Scholarships and Fellowships

- Student Presenter Fund, Graduate School, University of Kansas, May 2004.
- Nominee for the Dissertation Fellowship, Department of Electrical Engineering and Computer Science–School of Engineering, University of Kansas, February 2004.
- Research Grant, Doctoral Student Association, University of Missouri, Kansas City, MO, February 2000 and 1999.
- National Science Foundation (NSF) Research Experience for Undergraduates (REU) Award, NSF 93-112, April 1996.
- Special Chancellor's Award (a full scholarship for the undergraduate and graduate programs), University of Missouri, Kansas City, MO, August 1994–December 2000.

Professional Organization Memberships

- Institute for Electrical and Electronic Engineers (IEEE)
- IEEE-Computer Society
- Association for Computing Machinery (ACM)
- Security Analysis and Risk Management Association (SARMA)

J. Ryoo's Professional Vitae

- Korean-American Scientists and Engineers Association (KSEA)
- Korean Computer Scientists and Engineers Association in America (KOCSEA)

Certifications

- Certified Information Systems Security Professional (CISSP) since September 2007.

Professional Activities

Journal Editorship

- Associate Technical Editor, IEEE Communications, January 2008-present
- Editor, Journal of Computing Science and Engineering (JCSE), August 2007-present
- Member, Editorial Board, International Journal of Internet Technology and Secured Transactions (IJITST), August 2005-present.
- Reviewer, Computer and Security, November 2008-present.
- Reviewer, Information and Software Technology (IST), September 2008-present.

Program Committees

- Member, Program Committee, Innovations for Digital Inclusion, Second ITU-T Kaleidoscope Conference, Mar del Plata, Argentina, August 2009.
- Member, Program Committee, 10th Conference on Digital Government Research (dg.o 2009), Puebla, Mexico, May 2009.
- Member, Program Committee, 2009 ACM SIGMIS CPR Conference (SIGMISCPR 2009), Limerick, Ireland, May 2009.
- Member, Program Committee, the 24th Annual ACM Symposium on Applied Computing, Honolulu, Hawaii, March 2009.
- Member, Program Committee, the 22nd IEEE Conference on Software Engineering Education and Training (CSEE&T), Hyderabad, India, February 2009.
- Member, Program Committee, 39th Annual Meeting of the Decision Science Institute, Baltimore, Maryland, November 2008.
- Member, Program Committee, Innovations in NGN, First ITU-T Kaleidoscope Conference, Geneva, Switzerland, May 2008.
- Member, Program Committee, 21st IEEE Conference on Software Engineering Education and Training (CSEE&T), Charleston, SC, April 2008.

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- Member, Program Committee, 5th International Association for Science and Technology Development Asian Conference on Communication Systems and Networks, Langkawi, Malaysia, April 2008.
- Member, Program Committee, 5th IEEE International Conference on Software Engineering Research, Management, and Applications, Busan, South Korea, August 2007.
- Member, Program Committee, 2007 US-Korea Conference on Science, Technology, and Entrepreneurship (UKC-2007)/IT-Symposium, Washington DC, August 2007.
- Member, Program Committee, Association for Computing Machinery-Special Interest Group Management Information Systems Computer Personnel Research 2007, Saint Louis MO, April 2007.
- Member, Program Committee, 4th International Association for Science and Technology Development Asian Conference on Communication Systems and Networks, Phuket, Thailand, April 2007.

Book Reviews

- Reviewer, the Handbook of Computer Networks, John Wiley and Sons

Others

- Chair, Student Affairs, The 7th Korean Computer Scientists and Engineers Association in America Technical Symposium, University of Southern California, Los Angeles, California, December 2007.
- Chair, Scholarship Committee, Korean Computer Scientists and Engineers Association in America, September-December 2006, 2007, & 2008.
- Academics Officer, Korean Computer Scientists and Engineers Association in America, 2008
- Public Relations Officer, Korean Computer Scientists and Engineers Association in America, 2006 & 2007.

College Committees (The Pennsylvania State University)

..... **University-wide**

- Member, Uniform Course Abbreviation Committee for Information Sciences and Technology, November 2005-August 2006.
- Member, Curriculum Development Committee for SRA 221, Overview of Information Security, November 2006-present.
- Member, Curriculum Development Committee for IST 554, Network Management and Security, September 2007-present.

J. Ryoo's Professional Vitae

..... **Penn State Altoona**

- Member, Research Advisory Committee, January 2008-present.
- Member, Strategic Planning Committee for Information Technology, September 2005-present.
- Member, Mosaic Committee (for promoting diversity on campus), August 2006-present.

References

1. **Hossein Saiedian, Ph.D., Professor and Associate Chair**
Electrical Engineering and Computer Science
University of Kansas
Lawrence, Kansas 66045-7621
+1 (913) 897-8515
saiedian@ku.edu
2. **Susan Gauch, Ph.D., Professor and Department Head**
Computer Science and Computer Engineering
University of Arkansas, Fayetteville, AR 72701-1201
+1 (479) 575-6036
sgauch@uark.edu
3. **Dongwon Lee, Ph.D., Associate Professor**
College of Information Sciences and Technology
The Pennsylvania State University
University Park, Pennsylvania 16802-6823
+1 (814) 865-0687
dongwon@psu.edu