Yoohwan Kim, Ph.D., CISSP, CISA, CEH, CPT

Associate Professor
Department of Computer Science
University of Nevada, Las Vegas
4505 Maryland Parkway, Las Vegas, NV 89154-4019, USA
(702) 895-5348 (Office), (702) 895-3681 (Department), (702) 895-2639 (Fax)
Email: Yoohwan.Kim@unlv.edu
http://www.egr.unlv.edu/~yoohwan

MAIN RESEARCH AREAS

Network Security, Computer Security, Computer Networks, Data Analytics

CURRENT RESEARCH INTERESTS

- Secure Software and Network Protocol Development
- Big Data Analytics on Environmental Monitoring Data and Security Log Data
- Security / Privacy and Air Traffic Management for UAS (Unmanned Aircraft Systems)
- Critical Infrastructure / Smart Grid Security and Privacy
- Airport Security Inspection Software and DICOS Standard

EDUCATION

Aug. 2003	Ph.D. in Computer Engineering	Case Western Reserve University, Cleveland, Ohio
	(Dissertation Title: Towards Defeating Network Denial-of-Service Attacks)	
Aug. 1994	M.S. in Computer Science	Case Western Reserve University, Cleveland, Ohio
Feb. 1989	B.A. in Economics	Seoul National University, Seoul, South Korea

PROFESSIONAL CERTIFICATIONS

- CISSP (Certified Information Systems Security Professional) by (ISC)² (International Information System Security Certification Consortium), 2012
- CISA (Certified Information Systems Auditor) by ISACA (Information Systems Audit and Control Association), 2013 (Passed with Top 10% score)
- CEH (Certified Ethical Hacker) by EC Council, 2014
- CPT (Certified Penetration Tester) by IACRB (Information Assurance Certification Review Board), 2014

ACADEMIC APPOINTMENTS

2010 ~ present	Associate Professor	University of Nevada, Las Vegas (UNLV) Department of Computer Science
2004 ~ 2010	Assistant Professor	University of Nevada, Las Vegas (UNLV) Department of Computer Science

PROFESSIONAL EXPERIENCES

2011 Jul. ~ Oct.	**Visiting Researcher**	**Oak Ridge National Laboratory, Oak Ridge, TN**

- Collaborative Research at the CSIIR (Cyberspace Sciences and Information Intelligence Research) group on Information Security
- Developed methods for insider threat analysis and malware analysis

1999 ~ 2001	**Co-founder and Vice-President**	**Adnetware, Inc., Holmdel, NJ**

- Developed a technology for multimedia advertising on the web, pioneering the new area of *interstitial* advertisement (Full-browser advertising during web page transitions)
- Raised investment fund ($1.1M) and managed the development team
- Performed various marketing / sales / administration functions

1997 ~ 1999	**Member of Technical Staff**	**Lucent Technologies / Bell Labs, Whippany, NJ**
	Software Engineer	*Wireless Data Networking Laboratory*

- Developed software for 3G Wireless System (CDMA 2000) Base Transmission Station, the OA&M features (Cellsite initialization, flash file system, hardware resource allocation, remote reset, audit) on VxWorks and pSOS RTOS over PPC860 boards
- Developed Unix k-shell and tcsh scripts, makefiles for software builds and designed OO software in IONA Orbix (CORBA servers), UML/ObjectTeam
- Implemented various TCP/IP protocols, ACRNET bus data Link layer protocols, and proprietary protocol over Firewire (IEEE 1394). Configured ATM AAL2/AAL5 on FORE ATM switches. Worked with TDM bus protocol on Lucent Series II Cellsite

1994 ~ 1997	**Graduate Research Assistant**	**Case Western Reserve Univ., Cleveland, OH**

- Worked on Ph.D. dissertation in software design methodology, entitled "*Software architecture description language for agile manufacturing systems*"
- Researched on real-time control software for an agile manufacturing system composed of four Adept robots, sensors, actuators, and conveyers with reusable software design patterns (Sponsored by Energizer Battery Company)
- Implemented the real-time distributed control system on Unix/VxWorks, integrating Solaris workstations, m68k SBCs on VMEbus, robots, and computer vision in C++ / V+

1992 ~ 1994	**Database Programmer**	**Cleveland Clinic Foundation, Cleveland, OH**

- Processed massive financial data on IBM mainframe with TSO/SQL/NOMAD (4GL) and provided database reports to support managerial decision-making
- Developed a Client/Server financial information system on MS Windows/PC

1991	**MIS Consultant**	**Andersen Consulting (*now* Accenture), Seoul, Korea**

- Provided IT consulting for corporate customers
- Developed an Early Warning System for a manufacturing company
- Had an extensive training in CASE tools (3 weeks in St. Charles, IL, USA)

CONSULTING ACTIVITIES

2010 ~ 2013	Tele Security Sciences, Inc. (TSS)	Las Vegas, NV

- Developed network security schemes and control software for airport X-ray security scanners, and served on DICOS (Digital Imaging and Communication for Security) standard working group

2006	En Pointe Technologies	Dallas, TX

- Interfaced with Korean Information Security Agency for Common Criteria compliance in Korea and assisted with Korean security industry market research

2004 ~ 2005	Melior, Inc.	Dallas, TX

- Assisted developing DDoS attack blocking technologies

2004	KoamTac, Inc.	Edison, NJ

- Developed a complete 2-D barcode (PDF417) scanning software system in Visual C++ for a commercial barcode scanner embedded in a PDA

FUNDING SUMMARY

- Total Funding as a PI & Co-PI: $1,944,868
- Total Funding as a PI: $485,646
- Total External Funding as a PI: $423,616

FUNDED PROJECTS

1. Remote Sensing Laboratory/National Security Technologies, "*1SR (One Step Removed) Facility Protection Module, Part II*", Yoohwan Kim, $20,868 (PI), Mar. 2016
   - Cyber attack vulnerability study in NFC devices

2. Remote Sensing Laboratory/National Security Technologies, "*1SR (One Step Removed) Facility Protection Module, Part I*", Yoohwan Kim, $19,210 (PI), Sep. 2015

3. Ministry of Science, ICT and Future Planning, Republic of Korea, "*Collaborative Research on Public Key Infrastructure*", Yoohwan Kim, $10,000 (PI), Aug. 2015

4. UNLV Office of Sponsored Programs, "*Summer Institute*", Yoohwan Kim, $5,000 (PI), May 2015

5. Nevada NASA Space Grant, "*Developing Small UAS Traffic Management (sUTM) System*", Juyeon Jo, et al, $73,016 (Co-PI), Mar. 2015

6. Naval Air Warfare Center – Aircraft Division, "*Unmanned Aerial Vehicle (UAV) Research in Support of Counter Poaching Efforts as a Deterrent to Combatting Illicit Trafficking*", Mohamed Trabia, et al, $1,263,041 (Co-PI), Jul. 2014
   - Communication, control, and navigation system security sub-team for UAV

7. UNLV Faculty Opportunity Award, "A *Privacy Protection Scheme from Unmanned Aerial Systems (UAS)*", Yoohwan Kim, $20,000 (PI), Jul. 2014

8. UNLV Travel Fund, UNLV, Yoohwan Kim, $750 (PI), May 2014

9. UNLV Travel Fund, UNLV, Yoohwan Kim, $1,000 (PI), Oct. 2013

10. Remote Sensing Laboratory/National Security Technologies, "*Power Automation System (PAS) Vulnerability Assessment in Smart Grid, Part II*", Yoohwan Kim, $52,493 (PI), Sep. 2013

11. NSF/Intel CPS Cybersecurity, "*CPS Idea Lab Workshop*", Yoohwan Kim, $1,752 (PI), Aug. 2013

12. Nevada NSF EPSCoR, "*The Solar Energy-Water-Environment Nexus in Nevada*", UNLV-UNR-DRI team, $20,000,000 (Participant), Aug. 2013
    - Secure data collection, storage, and processing methods on environmental data

13. UNLV Faculty Opportunity Award, "*Revolutionizing the Authentication Paradigm with an Indirect User ID Mechanism*", Yoohwan Kim, $24,480 (PI), Jul. 2013

14. NCIIA, "*Las Vegas Lean Startup*", Hans Rawhouser, et al, $21,988 (Co-PI), Feb. 2013

15. National Security Agency, "*Information Assurance Scholarship Program at UNLV*", Juyeon Jo, et al, $32,361 (Co-PI), Oct. 2012

16. Remote Sensing Laboratory/National Security Technologies "*Power Automation System (PAS) Vulnerability Assessment in Smart Grid, Part I*", Yoohwan Kim, $48,000 (PI), Sep. 2012

17. Remote Sensing Laboratory/National Security Technologies "*New Hybrid TDMA/CSMA Wireless Mesh Networks (WMN) for Secure Smart Grid Communication*", Yoohwan Kim, $46,800 (PI), Sep. 2011

18. Oak Ridge National Laboratory/UT-Battelle, "*Cyber Resiliency Project Support*", Yoohwan Kim, $59,244 (PI), June 2011

19. Nevada NSF-EPSCoR, Cyberinfrastructure training program, "*Securing the cloud*", Yoohwan Kim, $2,713 (PI), Feb. 2011

20. INTEROP 2009, "Full registration fee support", Yoohwan Kim, $2,000 (PI), May 2009

21. Xilinx Inc., Equipment donation program, "*Utilizing FPGA development environment in class*", Yoohwan Kim, $7,502 (PI), July 2008

22. US Air Force / General Dynamics, *"A Hierarchical Communication Architecture for Secure non-LOS Communication in a UAV Fleet without GPS Links"*, Yoohwan Kim, $37,781 (PI), July 2007

23. US Air Force / General Dynamics, *"Development of High Performance, Low Energy Consumption Reconfigurable Computing Platform and Software Architecture for Cooperative UAVs"*, Yoohwan Kim, et al, $55,253 (PI), July 2007

24. Japan Patent Office, "*Collaborative research in Computer Security and Privacy*", Yoohwan Kim, $10,000 (PI), June 2007

25. UNLV Travel Fund, UNLV, Yoohwan Kim, $1,000 (PI), June 2007

26. UNLV Research Infrastructure Award Program (RIAP), "*Infrastructure Dev. for Research on SoC and Multi-Core Systems*", Mei Yang, et al, $68,816.48 (Co-PI), Feb. 2007

27. UNLV Travel Fund, UNLV, Yoohwan Kim, $1,000 (PI), Aug. 2006

28. UNLV New Investigator Award (NIA), "*Attack Traceback in Internet Distributed Denial-of-Service attack*", Yoohwan Kim, $8,800 (PI), Jan. 2005

29. Microsoft Research, Microsoft Trustworthy Computing Curriculum, "*Introducing Trustworthy Computing to CS and CE curriculum at UNLV*", Yoohwan Kim, et al, $50,000 (PI), Dec. 2004

PUBLICATIONS SUMMARY

- Journals: 23 papers (9 in Cybersecurity)
- Conferences: 59 papers (26 in Cybersecurity)
- Book Chapter: 1
- Patents: 6 (2 granted, 4 being processed)

PUBLICATIONS IN CYBERSECURITY

Journal papers

1. Sungchul Lee, Ju-Yeon Jo, and Yoohwan Kim, "*Authentication System for Stateless RESTful Web Service*", J. of Computational Methods in Science and Engineering (JCMSE), to be published 2016

2. Ki Park and Yoohwan Kim, "*Power Automation System (PAS) Cyber Vulnerability Assessment*", Site-Directed Research and Development (SDRD) Fiscal Year 2014 Annual Report, Nevada National Security Site (DOE/NV/25946—2416), U.S. Department of Energy, pp. 161-168, April, 2015

3. Sungchul Lee, Ju-Yeon Jo, and Yoohwan Kim, "*Environmental Sensor Monitoring with Secure RESTful Web Service*", Int'l Journal of Services Computing, Vol. 2, No. 3, pp. 30 – 42, July 2014

4. Ki Park and Yoohwan Kim, "*New Hybrid TDMA/CSMA Wireless Mesh Networks (WMN) for Secure Smart Grid Communication*", Site-Directed Research and Development (SDRD) Fiscal Year 2012 Annual Report, Nevada National Security Site (DOE/NV/25946—1722), U.S. Department of Energy, pp. 183-189, April, 2013

5. Jungeun Kim and Yoohwan Kim, "*A Secure on-line credit card transaction method: NNCC*", Journal of Computing Science and Engineering, by KIISE, Mar., 2011

6. Yoohwan Kim, Ju-Yeon Jo, and Kyunghee Kim Suh, "*Baseline Profile Stability for Network Anomaly Detection*", International Journal of Network Security (IJNS), vol. 6, no. 1, 2008, pp. 60-66, Jan. 2008

7. Yoohwan Kim, Wing Cheong Lau, Mooi Choo Chuah and H. Jonathan Chao, "*PacketScore: A Statistical Overload Control against Distributed Denial-of-Service Attacks*", IEEE Transaction on Dependable and Secure Computing, vol. 3, issue 2, pp. 141-155, Apr-Jun, 2006

8. Yoohwan Kim, Ju-Yeon Jo, Frank Merat, Mei Yang, and Yingtao Jiang, "*Mitigating Distributed Denial-of-Service Attack with deterministic Bit Marking*", International Journal of Information Technology, Vol. 11, No. 2, 2005, pp 62-82

9. Jinhua Zhao, Ling Wang, Yoohwan Kim, Yingtao Jiang, and Xiaozong Yang, "*Secure Dynamic Gateway to Internet Connectivity for Ad-hoc Network*", Int'l Journal of Information Technology, Vol. 11, No. 2, 2005, pp. 136-152

Conference papers

1. Candace Suh-Lee, Juyeon Jo, and Yoohwan Kim, "*Text Mining for Security Threat Detection Discovering Hidden Information in Unstructured Log Messages*", IEEE Conference on Communications and Network Security (CNS), Oct. 2016

2. Yoohwan Kim, Juyeon Jo and Sungchul Lee, "*A Secure Location Verification Method for ADS-B*", IEEE/AIAA 35th Digital Avionics Systems Conference (DASC), Sep. 2016

3. Haysam Selim, Shahab Tayeb, Yoohwan Kim, Justin Zhan, and Matin Pirouz, "*Vulnerability Analysis of Iframe Attacks on Websites*", The 3rd Multidisciplinary International Social Networks Conference on Social Informatics, Aug. 2016

4. Sai Ram Ganti and Yoohwan Kim, "*Implementation of Detection and Tracking Mechanism for Small UAS*", International Conference on Unmanned Aircraft Systems (ICUAS), June 2016

5. Sachiko Sueki and Yoohwan Kim, "*Vulnerabilities and Mitigation Methods in the NextGen Air Traffic Control System*", 13th International Conference on Information Technology: New Generations (ITNG), April 2016

6. Sungchul Lee, Juyeon Jo, and Yoohwan Kim, "*Secure and Stateless RESTful Web Service Using ID-Based Encryption*", 28th International Conference on Computer Applications in Industry and Engineering, October 2015

7. Robert Gripentog and Yoohwan Kim, "*Utilizing NFC to secure identification*", IEEE/ACIS 14th International Conference on Computer and Information Science (ICIS), June 2015

8. Sungchul Lee, Ju-Yeon Jo, and Yoohwan Kim, "*Method for secure RESTful web service*", IEEE/ACIS 14th International Conference on Computer and Information Science (ICIS), June 2015

9. Sai Ram Ganti and Yoohwan Kim, "*Design of Low-Cost On-board Auto-tracking Antenna for Small UAS*", 12th Int'l Conference on Information Technology: New Generations (ITNG), April 2015

10. Sweta Gurung, and Yoohwan Kim, "*Healthcare Privacy: How Secure Are the VOIP/Video-Conferencing Tools for PHI Data?*", 12th International Conference on Information Technology-New Generations (ITNG), April 2015

11. Tara Baniya, Dipesh Gautam, and Yoohwan Kim, "*Safeguarding Web Surfing with URL Blacklisting*", 12th International Conference on Information Technology-New Generations (ITNG), April 2015

12. Juyeon Jo, Yoohwan Kim and Sungchul Lee, "*Mindmetrics: Identifying users without their login IDs*", IEEE International Conference on Systems, Man and Cybernetics (SMC), Oct. 2014

13. Jinho Ahn and Yoohwan Kim, "*Effective SBML Protocol for Tolerating Concurrent Failures Based on Broadcast Networks*", IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC), Aug. 2014

14. Yoohwan Kim, Juyeon Jo, and Sanjeeb Shrestha, "*A server-based real-time privacy protection scheme against video surveillance by Unmanned Aerial Systems*", International Conference on Unmanned Aircraft Systems (ICUAS), May 2014

15. Amritha Premnath, Juyeon Jo, and Yoohwan Kim, "*Application of NTRU Cryptographic Algorithm for SCADA Security*", 11th International Conference on Information Technology: New Generations (ITNG), April 2014

16. Yoohwan Kim and Frederick Sheldon, "*Anomaly Detection in Multiple Scale for Insider Threat Analysis*", 7th CSIIRW, Oct. 2011

17. Kevin Benton, Juyeon Jo, and Yoohwan Kim, "*SignatureCheck: A Protocol to Detect Man-In-The-Middle Attack in SSL*", 7th CSIIRW, Oct. 2011

18. Yoohwan Kim, Wei Ren, Ju-Yeon Jo, Mei Yang, Yingtao Jiang, Jun Zheng," *SFRIC: A Secure Fast Roaming Scheme in Wireless LAN Using ID-Based Cryptography*", IEEE International Conference on Communications (ICC), June 2007

19. Wei Ren, Yoohwan Kim, Ju-Yeon Jo, Mei Yang and Yingtao Jiang, "*IdSRF: ID-based Secure Routing Framework for Wireless Ad-Hoc Networks*", ITNG 2007, April 2007

20. Yoohwan Kim, Ahmed Abd El Al, Ju-Yeon Jo, Mei Yang and Yingtao Jiang," *An Efficient Defense against Distributed Denial-of-Service Attacks using Congestion Path Marking*", IEEE ICC, June 2006

21. Yoohwan Kim, Ju-Yeon Jo, Kyunghee Suh, "*Baseline Profile Stability for Network Anomaly Detection*", ITNG 2006, Las Vegas, NV, Apr, 2006

22. Ju-Yeon Jo, Yoohwan Kim, and Jeffrey Sampson, "*A Spam Mail blocking scheme with puzzles and tokens*", Network/Computer Security Workshop, Bethlehem, PA, Aug. 2005

23. Mooi Choo Chuah, Wing Cheong Lau, Yoohwan Kim and H. Jonathan Chao, "*Transient performance of PacketScore for blocking DDoS attack*", IEEE ICC, June 2004

24. Yoohwan Kim, Wing Cheong Lau, Mooi Choo Chuah and H. Jonathan Chao, "*PacketScore: Statistical-based Overload Control against Distributed Denial-of-Service Attacks*", IEEE INFOCOM, San Francisco, CA, March 2004

25. Yoohwan Kim, Ju-Yeon Jo and Frank Merat, "*Defeating Distributed Denial-of-Service Attack with Deterministic Bit Marking*", IEEE GLOBECOM, December 2003

26. Yoohwan Kim, Ju-Yeon Jo, H. Jonathan Chao and Frank Merat, "*High-Speed Router Filter for Blocking TCP Flooding under Distributed Denial-of-Service Attack*", IEEE International Performance Computing and Communications Conference (IPCCC), April 2003

PUBLICATIONS IN OTHER AREAS

Journal papers

1. Sungchul Lee, Eunmi Hwang, Juyeon Jo, and Yoohwan Kim, "*Big Data Analysis with Hadoop on Personalized Incentive Model with Statistical Hotel Customer*", ACIS International Journal of Software Innovation (IJSI), Vol. 4, No. 3, July 2016

2. Sungchul Lee, Ju-Yeon Jo, and Yoohwan Kim, "*Restful Web Service and Web-Based Data Visualization for Environmental Monitoring*", International Journal of Software Innovation (IJSI), Vol. 3, No. 1, pp. 75-94, January 2015

3. Yan Jin, Ling Wang, Ju-Yeon Jo, Yoohwan Kim, Mei Yang, and Yingtao Jiang, "*EECCR: an Energy Efficient m-Coverage and n-Connectivity Routing Algorithm under Border Effects in Heterogeneous Sensor Networks*", IEEE Transactions on Vehicular Technology, vol. 58, issues 3, pp. 1429-1442, March 2009

4. Yan Jin, Ju-Yeon Jo, and Yoohwan Kim, "*Energy-Efficient Multi-Hop Communication Scheme In Clustered Sensor Networks*", International Journal of Innovative Computing, Information and Control, vol. 4, no. 7, pp.1741-1749, July 2008

5. Yan Jin, Ju-Yeon Jo, Ling Wang, Yoohwan Kim, and Xiaozong Yang, "*ECCRA: An energy-efficient coverage and connectivity preserving routing algorithm under border effects in wireless sensor networks*", Computer Communications (Elsevier), vol. 31, issue 10, pp. 2398-2407, June 2008

6. Yan Jin, Ling Wang, Yoohwan Kim, and Xiaozong Yang, "*Energy Efficient Non-Uniform Clustering Division Scheme in Wireless Sensor Networks*", Wireless Personal Communications (Springer), vol. 45, no.1, pp. 31-43, April. 2008

7. Yan Jin, Ling Wang, Yoohwan Kim, and Xiaozong Yang, "*EEMC: An energy-efficient multi-level clustering algorithm for large-scale wireless sensor networks*", Computer Networks (Elsevier), vol. 52, issue 3, pp. 542-562, Feb. 2008

8. Yan Jin, Ling Wang, Yoohwan Kim and Xiaozong Yang, "*Connectivity and lifetime of data aggregation tree in unreliable sensor node*", The Mediterranean Journal of Electronics and Communications (MJEC), Vol. 3, No. 1, pp. 23-30, 2007

9. Yan Jin, Ling Wang, Yoohwan Kim, and Xiaozong Yang, "*Optimal Task-Specific Clustering Scheme in Unreliable Wireless Sensor Networks*", IJCSNS International Journal of Computer Science and Network Security Computing, vol. 6, no. 7B, pp. 30-36, July, 2006

10. Yan Jin, Ling Wang, Yoohwan Kim, and Xiaozong Yang, "*Optimal Clustering Scheme Based On Minimal Cost In Unreliable Wireless Sensor Networks*", The Mediterranean Journal of Computers and Networks, vol. 2, no. 2, pp. 90-99, April, 2006

11. L. Zhang, R. Raut, Yingtao Jiang, U. Kleine, and Y. Kim, "*Macro-Cell Placement for Analog Physical Designs Using a Hybrid Genetic Algorithm with Simulated Annealing,*" International Journal of Integrated Computer-Aided Engineering, vol. 12, no. 4, pp. 379-396, Dec. 2005

12. L. Zhang, R. Raut, Yingtao Jiang, U. Kleine, and Y. Kim, "*A Hybrid Evolutionary Analogue Module Placement Algorithm for Integrated Circuit Layout Designs,*" International Journal of Circuit Theory and Applications, vol. 33, no. 6, pp. 487-501, Nov. 2005

13. Wyatt Newman, Andy Podgurski, Roger Quinn, Frank Merat, Michael S. Branicky, Nick A. Barendt, Greg C. Causey, Erin L. Haaser, Yoohwan Kim, Jayendran Swaminathan and Virgilio B. Velasco "*Design Lessons for Building Agile Manufacturing Systems*", IEEE Transactions on Robotics and Automation, Vol. 16, No. 3, June 2000, pp 228-238

14. Roger Quinn, Greg Causey, Frank Merat, David Sargent, Nicholas Barendt, Wyatt Newman, Virgilio Velasco, Andy Podgurski, Ju-Yeon Jo, Leon Sterling and Yoohwan Kim, "*An Agile Manufacturing Workcell Design*", IIE (Institute of Industrial Engineers) Transactions, Vol. 29, no. 10, Oct. 1997

Conference papers

1. Sungchul Lee, Ju-Yeon Jo, and Yoohwan Kim, "*Performance Improvement of MapReduce Process Using Limited Node Block Placement Policy*", The 3rd IEEE International Conference on Data Science and Advanced Analytics (DSAA), Oct. 2016.

2. Sungchul Lee, Ju-Yeon Jo, and Yoohwan Kim, "*Data Analysis at Single-Mode and Multi-Mode for Data Center*", ISCA 25th Int'l Conf. on Data Engineering and Software Engineering (SEDE), Sep. 2016

3. Guodong Zhang, Ying Shao, Yoohwan Kim, and Wei Guo, "*Vertebrae Detection Algorithm in CT Scout Images*", Chinese Conference on Image and Graphics Technologies, July 2016

4. Mandana Bozorgi, and Yoohwan Kim, "*Privacy-preserving Data Mining on Hospitality Big Data*", 16th International Conference on Gambling & Risk Taking, June 2016

5. Yoohwan Kim, Juyeon Jo, and Monetta Shaw, "*A Lightweight Communication Architecture for Small UAS Traffic Management (SUTM)*", ICNS, April 2015

6. Sungchul Lee, Juyeon Jo, and Yoohwan Kim, "*Performance testing of web-based data visualization*", IEEE International Conference on Systems, Man and Cybernetics (SMC), Oct. 2014

7. Sungchul Lee, Juyeon Jo, Yoohwan Kim, and Haroon Stephen, "*A framework for environmental monitoring with Arduino-based sensors using Restful web service*", IEEE International Conference on Services Computing (SCC), pp. 275-282, June 2014

8. Yoohwan Kim, Hye Rim Cheon, Jae Hyun Kim, "*New Power Saving Algorithm considering Associated STAs and Consecutive Traffics in WLAN AP*", ACM ICUIMC 2013, Malaysia, Jan. 2013

9. Kyu Hwan Lee, Sung Hyun Cho, Jae Hyun Kim, Yoohwan Kim, Juyeon Jo, "*The Energy Saving Strategy using the Network Coding in the Wireless Mesh Network*", ACM ICUIMC 2012, Kuala Lumpur, Malaysia, Feb. 2012

10. Yan Jin, Ju-Yeon Jo, Mei Yang, Yoohwan Kim, Yingtao Jiang and John Gowens, "*HTSMA: a hybrid temporal-spatial multi-channel assignment scheme in heterogeneous wireless mesh networks*", IEEE GlobeCom 2009, December 2009

11. Yan Jin, Ju-Yeon Jo, Yoohwan Kim, Yingtao Jiang, Mei Yang, "*EECCP: an energy-efficient coverage-and connectivity preserving algorithm under border effects in wireless sensor networks*", Wireless Telecommunications Symposium (WTS), 2008

12. Gopinath Balakrishnan, Mei Yang, Yingtao Jiang, Yoohwan Kim, "*Performance Analysis of Error Control Codes for Wireless Sensor Networks*", ITNG 2007, April 2007

13. Mei Yang, Yoohwan Kim, Yingtao Jiang, Shupeng Wang, Ahmed Abdelal, "*An Improved Multi-Layered Architecture and its Rotational Scheme for Large-Scale Wireless Sensor Networks*", IEEE CCNC, Jan. 2007

14. Yan Jin, Wang Ling, Yoohwan Kim, and Xiaozong Yang, "*Energy of Flat vs. Clustering Wireless Sensor Networks: A Comparative Study*", First International Conference on Communications and Networking in China (CHINACOM 2006), Oct, 2006

15. Yan Jin, Wang Ling, Yoohwan Kim, and Xiaozong Yang, "*Lifetime Analysis of Data Aggregation Tree with Unreliable Sensor Node*", 1st Int'l Conference on Communications and Electronics (ICCE 2006), Oct, 2006

16. Yan Jin, Wang Ling, Yoohwan Kim, and Xiaozong Yang, "*EEMC: An Energy-Efficient Multi-tier Clustering Algorithm for Large-Scale Wireless Sensor Networks*", 2nd Int'l Conference on Wireless Communications, Networking and Mobile Computing (IEEE WiCOM 2006), Sep, 2006

17. Wei Ren, Mei Yang, Yoohwan Kim, and Yingtao Jiang, "*TCP-CDR: an end-to-end scheme for TCP over mobile ad hoc networks*," IEEE International Conf. on ITS Telecommunications, Jun. 2006, pp 767-772

18. M. Yang, J. Wang, Z. Gao, Yingtao Jiang, and Y. Kim, "*Coordinated Robust Routing by Dual Cluster Heads in Layered Wireless Sensor Networks*," Proc. IEEE 8th International Symposium on Parallel Architectures, Algorithms and Networks (ISPAN'05), pp. 454-461, Dec. 2005

19. Ju-Yeon Jo and Yoohwan Kim, "*Hash-based Internet Traffic Load Balancing*", IEEE IRI, Las Vegas, NV, Nov. 2004

20. Yoohwan Kim, Ju-Yeon Jo, H. Jonathan Chao and Frank Merat, "*High-Speed Router Filter for Blocking TCP Flooding under Distributed Denial-of-Service Attack*", IEEE International Performance Computing and Communications Conference (IPCCC), April 2003

21. Yoohwan Kim and H. Jonathan Chao, "*Performance of Exhaustive Matching Algorithms for Input Queued Switches*", IEEE ICC, May 2003

22. Ju-Yeon Jo, Yoohwan Kim, and H. Jonathan Chao, "*TCP Performance Comparison under Various Load Balancing Methods using OPNET*", OPNETWORK, August 2002

23. Ju-Yeon Jo, Yoohwan Kim, H. Jonathan Chao and Frank Merat, "*Internet Traffic Load Balancing using Dynamic Hashing with Flow Volume*", SPIE ITCom, July 2002

24. Wyatt Newman, Frank Merat, Michael Branicky, Virgilio Velasco, Nicholas Barendt, Andy Podgurski, Yoohwan Kim, Ju-Yeon Jo, Roger Quinn and Greg Causey, "*Technologies for Robust Agile Manufacturing*", IASTED 6th International Conference on Robotics and Manufacturing, 1998

25. Ju-Yeon Jo, Yoohwan Kim, Scott Ameduri and Andy Podgurski, "*A New Role of Graphical Simulation: Software Testing*", 30th Annual Simulation Symposium, April 1997

26. Ju-Yeon Jo, Yoohwan Kim, Andy Podgurski and Wyatt Newman, "*Virtual Testing of Agile Manufacturing Software Using 3D Graphical Simulation*", IEEE Int. Conf. on Robotics & Automation, Apr 1997

27. Yoohwan Kim and Ju-Yeon Jo, Andy Podgurski, Gultekin Ozsoyoglu, Virgilio Velasco, Nicholas Barendt and Frank Merat, "*A Flexible Software Architecture for Agile Manufacturing*", IEEE International Conference on Robotics and Automation, April 1997

28. Frank Merat, Nicholas Barendt, Roger Quinn, Greg Causey, Wyatt Newman, Virgilio Velasco, Andy Podgurski, Yoohwan Kim, Gultekin Ozsoyoglu and Ju-Yeon Jo, "*Advances in Agile Manufacturing*", IEEE International Conference on Robotics and Automation, April 1997

29. Roger Quinn, Greg Causey, Frank Merat, David Sargent, Nicholas Barendt, Wyatt Newman, Virgilio Velasco, Andy Podgurski, Ju-Yeon Jo, Leon Sterling and Yoohwan Kim, "*Design of an Agile Manufacturing Workcell for Light Mechanical Applications*", IEEE International Conference on Robotics and Automation, April 1996

30. Sungkil Lee, Huang-Cheng Kuo, N. Hürkan Balkir, Yoohwan Kim and Gultekin Ozsoyoglu "*A Database Server for an Agile Manufacturing System with or without Time Constraints*", Conference on Agile and Intelligent Manufacturing Systems, Oct. 1996

Video conferences (refereed)

1. Roger Quinn, Greg Causey, Matthew Birch, Wyatt Newman, Frank Merat, Michael Branicky, Virgilio Velasco, Nicholas Barendt, Andy Podgurski, Yoohwan Kim and Ju-Yeon Jo, "*Technologies for Robust Agile Manufacturing*", IEEE International Video Conference on Robotics and Automation, April 1998. (Nominated for the best video)

2. Roger Quinn, Greg Causey, Frank Merat, Nicholas Barendt, Wyatt Newman, Virgilio Velasco, Andy Podgurski, Yoohwan Kim, Gultekin Ozsoyoglu and Ju-Yeon Jo, "*Advances in Agile Manufacturing*", IEEE International Video Conference on Robotics and Automation, April 1997

3. Roger Quinn, Greg Causey, Frank Merat, David Sargent, Nicholas Barendt, Wyatt Newman, Virgilio Velasco, Andy Podgurski, Ju-Yeon Jo, Leon Sterling and Yoohwan Kim, "*Agile Manufacturing Workcell for Light Mechanical Assembly*", IEEE Int'l Video Conference on Robotics and Automation, April 1996

Book chapter

1. Sungkil Lee, Huang-Cheng Kuo, N. Hürkan Balkir, Yoohwan Kim and Gultekin Ozsoyoglu "*A Real-Time Database Server in an Agile Manufacturing System*", Son, S., ed. Real-Time Database System, Kluwer Academic Publishers, 1996

PATENTS

1. U.S. Provisional Application, "*Methods And Systems For Secure Location Verification*", Yoohwan Kim, Juyeon Jo, filed on July 29, 2016

2. US Patent 9,036,782, 2015, "*Dual energy backscatter X-ray shoe scanning device*", Samuel M Song, Brian Kauke, Yoohwan Kim, Douglas P Boyd, **granted** on May 19, 2015

3. U.S. Provisional Application No. 62/145,953, "*Methods And Systems For Unmanned Aircraft System (UAS) Traffic Management*", Juyeon Jo, Yoohwan Kim, filed on April 10, 2014

4. US Patent App. 14/591,208, 2015, "*Obscuring Usernames During a Login Process*", Juyeon Jo, Yoohwan Kim, filed on Jan. 10, 2014

5. US Patent 7,526,807, 2009, "*Distributed architecture for statistical overload control against distributed denial of service attacks*", Hung-Hsiang Jonathan Chao, Mooi Choo Chuah, Yoohwan Kim, Wing Cheong Lau, **granted** on Apr 28, 2009

6. US Patent App. 09/940,923, 2001, "*Method and apparatus for information delivery on the internet*", Y Kim, D Chung, filed on Aug. 28, 2001

PUBLIC COURSES AND PRESENTATIONS

1. "*Cybersecurity Vulnerabilities in NextGen Air Traffic Control System*", UKC 2016, Computer Science and Information Technology Symposium (CIT), Aug. 2016

2. "*Communication and Network Security*", ISSA Las Vegas Chapter, CISSP Preparation Course, Feb. 27, 2016 **(1 day)**

3. "*Crytocurrency (Bitcoin) and its Applications*", US Secret Service Electronic Crimes and Identity Fraud Task Force Quarterly Meeting, Nov. 18, 2015

4. "*Application of NTRU Cryptographic Algorithm for securing SCADA communication*", UKC 2014, Computer Science and Information Technology Symposium (CIT), Aug. 2014

5. *"Telecommunication and Network Security, Cryptography"*, ISSA Las Vegas Chapter, CISSP Preparation Course, Jan./Feb. 2014 **(2 days)**

6. *"Practical Aspects of Cybersecurity With Emphasis on Wireless LAN and SCADA Security"*, Korea Information and Communications Society (KICS), July 2013 **(3 days)**

7. *"Thwarting Man-In-The-Middle Attack in SSL with 3rd Party Verification"*, Ajou University, South Korea, June 2013

8. *"Wireless network Security issues"*, Interview with Las Vegas TV Channel 13 on cybersecurity

9. *"A Consumer Level Simulation Model for Demand Response Analysis on Smart Grid"*, Cybersecurity Symposium, UNLV, Sep. 2012

10. *"Computer Networks and Cybersecurity"*, NV Gaming Control Board, Jul/Aug, 2012 **(2 days)**

11. *"Design of a secure electronic payment system"*, KSEA Southwest Regional Conference, Feb 2011

12. *"Smart Meter Net Analyzer with Simulation and Visualization"*, NVEnergy, May, 2010

13. *"Network Security Theory and Practice"*, Summer Special Lecture Series, Korea University of Technology Education, July 2009 **(5 days)**

14. *"A Hierarchical Communication Architecture for Secure non-LOS Communication in a UAV Fleet without GPS Links"*, Air Force Research Laboratory, Dayton, OH, Feb. 2009

15. *"Network Security Theory and Practice"*, Winter Special Lecture Series, Korea University of Technology Education, Jan. 2008 **(5 days)**

16. *"The Art of Hacking"*, KOCSEA (Korean Computer Scientists and Engineers Association in America) Annual Workshop, Los Angeles, Dec. 2007

17. *"SFRIC: A Secure Fast Roaming Scheme in Wireless LAN Using ID-Based Cryptography"*, Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China, May 2007

18. *"Hierarchical Communication Architecture for UAV fleet"* to US Air Force representative at UNLV campus, Mar. 2007

19. *"SFRIC: Secure and Fast Roaming Scheme in Wireless LAN"*, KOCSEA (Korean Computer Scientists and Engineers Association), Phoenix, AZ, Dec. 15, 2006

20. *"Designing Wireless Sensor Network"*, 3DSP. Inc., Irvine, CA, Jul. 2006

21. *"Orientation session for Capture the flag competition in DEFCON conference for UNLV student security team"*, UNLV, June 2006

22. *"The Art of hacking"*, IEEE Las Vegas local chapter, UNLV, Oct. 2006

23. *"Hacking techniques"*, UNLV ACM student chapter, Apr. 2005

24. *"Starting a Venture Company for Engineers"* at KSEA (Korean-American Scientists and Engineers Association) New Jersey Chapter Technical Seminar, Middletown, NJ, June 2001

25. *"A Flexible Software Architecture for Agile Manufacturing"* at KSEA Northeast Ohio Chapter 11th Annual Technical Conference, Cleveland, OH, May 1997

PROFESSIONAL TRAINING ATTENDED (131 days)

SANS Security Training Received

Feb. 2013   SANS Security Conference, Orland, FL (2 days),
- *Smart Grid Penetration Testing*

Apr. 2007	SANS Security Conference, San Diego, CA (6 days)
	▪ *Security 507: Auditing Networks, Perimeters & Systems*
Jun. 2006	SANS Security Conference, Columbia, MO (6 days)
	▪ *Security 508: System Forensics, Investigation and Response*
Jun. 2006	SANS Security Conference, Denver, CO (1 day)
	▪ *Advanced Network Worms and Bot Analysis*
May 2006	SANS Security Conference, Denver, CO (6 days)
	▪ *Security 503: Intrusion Detection In-Depth*
Jun. 2005	SANS Security Conference, Denver, CO (5 days)
	▪ *Security 617: Assessing and Securing Wireless Networks*
Apr. 2004	SANS Security Conference, San Diego, CA (6 days)
	▪ *Security 504: Hacker Techniques, Exploits and Incident Handling*
Oct. 2004	SANS Security Conference, Las Vegas, NV (6 days)
	▪ *Security 401: Security Essentials Bootcamp Style*

Other Security Training Received

Aug. 2014	BSides Las Vegas Security Workshop, Las Vegas, NV (2 days)
	▪ *Wireless Network Penetration Testing Techniques*
Dec. 2013	Infosec Institute, Colorado Springs, CO (5 days)
	▪ *Certified Ethical Hacker Training*
Nov. 2010	NIETP CAE/IAE Pre-Conference Workshop, St. Louis, MO (4 days)
	▪ *Control System (SCADA) Security*
Jul. 2005	Cisco CIAG class, Baltimore, MD, (4 days)
	▪ *Professor Bootcamp for Network Security (Firewall / IDS / IPS)*

Security Conferences Attended

Aug. 2016	Defcon 2016 Conference, Las Vegas, NV (4 days)
Aug. 2016	BSides Las Vegas 2016, Las Vegas, NV (2 days)
Aug. 2014	NSF/Intel CPS, Cyber Physical System Security Workshop, Washington, DC (5 days)
Jul. 2013	Defcon 2013 Conference, Las Vegas, NV (3 days)
Nov. 2010	CAE/IAE Principals Conference, St. Louis, MO (2 days)
Jul. 2010	Defcon 2010 Conference, Las Vegas, NV (3 days)
Apr. 2010	Annual Vanguard Security 2010, Las Vegas, NV (3 days)
Nov. 2009	CAE/IAE Principals Conference, Tampa, FL (2 days)
Aug. 2005	Network Security Workshop, Lehigh University, Bethlehem, PA (2 days)
Jul. 2005	Defcon 2005 Conference, Las Vegas, NV (3 days)
Feb. 2005	Microsoft Workshop for Trustworthy Computing, Redmond, WA (3 days)
Dec. 2004	Information Assurance Symposium, Regional Info. Security Center, Pomona, CA (1 day)
Feb. 2004	RSA Security Conference, San Francisco, CA (4 days)

Other IT Training Received

| May 2016 | Learning Tree, Software Defined Networking, New York, NY (3 days) |

June 2015	University of Illinois, GENI 2015, Software Defined Networks Training, Urbana, IL (3 days)
Mar 2015	Commercial UAS Conference, Alexandria, VA (2 days)
Oct. 2014	Intel Xeon Phi™ Coprocessor Developer Training, Las Vegas, NV (1 day)
Jun. 2014	Learning Tree, Big Data Analytics, Rockville, MD (3 days)
Mar. 2014	Atmel Technology on Tour Mobile Trailer Training, Las Vegas (1 day)
Feb. 2014	Embry-Riddle Aeronautical University, UAS Applications, Operations, and Support Workshop, Las Vegas, NV (2 days)
Sep. 2013	Lean Startup Educators Workshop, Columbia University, New York, NY (3 days)
Mar. 2013	UCLA Smart Grid Technology Workshop, Los Angeles, CA (5 days)
Nov. 2011	OPNET Modeler network simulator training, Bethesda, MD (5 days)
Nov. 2011	Cisco Netflow 101 Seminar, by Lancope, Las Vegas, NV (1 day)
June 2011	Learning Tree, Cloud Computing Technologies, Arlington, VA (3 days)
Oct. 2010	OPNET Modeler network simulator training, Santa Clara, CA (5 days)
Aug. 2007	Xilinx Training Workshop on advanced VHDL/FPGA, Longmont, Colorado (1 day)
July, 2007	Xilinx Training Workshop on VHDL/FPGA Programming, Baltimore, MD (3 days)

COURSES TAUGHT AT UNLV

1. CS 443 Information Assurance   (F 2013, F 2015, F 2016)
2. CS 445 Internet Security   (F 2005, F 2006, F 2007, S 2010, S 2012, S 2013, S 2014, S 2016)
3. CS 448 Computer Security   (F 2004, S 2006, S 2007, S 2008, S 2009, S 2011)
4. CS 789 Advanced Network Security   (F 2005, F 2012, F 2014)
5. CS 465 Computer Networks I   (F 2008, F 2009, F 2010)
6. CS 466 Computer Networks II   (S 2009, S 2011)
7. CS 302 Data Structures   (F 2004)
8. CS 219 Computer Organization   (S 2006, F 2006, S 2007, F 2007, S 2008, F 2008, F 2009, F 2010, S 2010, S 2011, S 2012, F 2012, S 2013, F 2013, S 2014, F 2014, F 2015, S 2016, F 2016)

STUDENT ADVISING

Graduate Students

1. Sai Ram Ganti (Spring, 2016)
   - *Security Threats From UAS And Its Mitigation Through Detection And Tracking*
2. Candace Suh-Lee (Spring, 2016), Electric Power Research Institute (EPRI), Inc.
   - *Mining Unstructured Log Messages For Security Threat Detection*
3. Monetta Shaw (Spring 2016)
   - *A Web-Based Solution for Small Unmanned Aircraft System (sUAS) Traffic Management*
4. Anusha Ramanathan (Spring, 2015), EMC Corp.
   - *A Multi-Level Trust Management For Internet Of Things*
5. Tejaswini Papireddy (Spring, 2015)
   - *Tracking and Monitoring Unmanned Aircraft Systems Activities with Crowd-Based Mobile Apps*

6. Surendra Shrestha (Spring, 2014)
   - *A Light-Weight Real-Time Privacy Protection Scheme for Video Surveillance by Unmanned Aircraft Systems*
7. Naga Shalini Vadlamani (Fall 2013), Bally Tchnologies
   - *A Survey on Detection and Defense of Application Layer DDoS Attacks*
8. Christopher Clark (Spring 2013), Sandia National Lab
   - *Insider Threat Analysis and Detection*
9. Amritha Puliadi Premnath (Spring 2013)
   - *Application of NTRU Cryptographic Algorithm For Securing SCADA Communication*
10. Sungchul Lee (Spring 2012), Ph.D. Program at UNLV
    - *Privacy protection schemes in Smart Grid networks*
11. Jungeun Kim (Spring 2010), Microsoft Corp.
    - *A secure online credit card transaction method*
12. Adam Seymour and Raymond Yost (Project: Fall 2009)
    - *Hardware cryptographic system design & implementation of secure cellular communication*
13. Deepa Uppala (Spring 2008), Yahoo, Inc.
    - *Graphical Framework for Managing Component Oriented Graphic system*
14. Kurtis Kopf (Project: Fall, 2007 – Fall 2008), Summerlight, Inc.
    - *A Hierarchical Communication Architecture for Secure non-LOS Communication in a UAV Fleet without GPS Links*
15. Kunal Metkar (Fall 2007), Allegro Development Corp.
    - *Defense against Buffer Overflow Attack by Software Design diversity*
16. Nathan Whittacre (Fall 2007), Stimulus Technologies
    - *Collaborative Intelligent Email Ranking System*
17. Sourabh Ghose (Spring 2007), Software AG, Singapore
    - *Design Implementation & analysis of a dynamic cryptography algorithm with Applications*
18. Karthik Raghavan (Spring 2007), Bally Technologies
    - *Security Protocol Based on Random Key Generation for an RFID System*
19. Amruta Tilaye (Summer 2006), PriceWaterhouseCoopers, India
    - *WinWebWatcher - A Network Security Utility for System Administrators*

Undergraduate Students & Interns

1. Lucas Miranda Tonon (Summer 2016), Universidade Estadual de Campinas, Limeira, Brazil
   - *Implementing Network Security Functions in Software Defined Network using Open Daylight*
2. John Parin (Summer 2015), Rensselaer Polytechnic Institute
   - *Tracking Unmanned Aircraft Systems with ADS-B using Software Defined Radio*
3. Jake Lee (Summer 2014), Columbia University
   - *An Analysis of Energy and Hardware Impacts on the Bitcoin Mining Network*
4. Sharon Fang (Summer 2014), Duke University
   - *The Status and Trends in Cryptocurrency*
5. Bridger Heizer (Fall 2012 – Spring 2013), US Government
   - *Cybersecurity analysis of electrical power grid*
6. Dominic Mohrhardt and Jeffrey Richardson (Fall 2009 – Spring 2010), UNLV

- *Wireless Network Cracker, a handheld WEP/WPA key cracking device*

7. Kevin Goble, et al (Fall 2010), UNLV
   - *NCIIA proposal, "Drowsiness prevention for drivers with brainwave measurement & manipulation"*

8. Kareem Matariyeh and Chehun Kim (Fall 2007 – Fall 2008), US Air Force
   - *Development of High Performance, Low Energy Consumption Reconfigurable Computing Platform and Software Architecture for Cooperative UAVs*

9. Andrew Menrije and Desiree Preussler (Summer 2005), UNLV
   - *Survey on Elliptic Curve Cryptography*

POSTDOCTORS AND VISITING SCHOLARS HOSTED

1. Prof. Guodong Zhang (Shenyang Aerospace University, China), Visiting Scholar, 2016-2017
2. Mr. Eunsung Lee (Ministry of Science, ICT and Future Planning, Republic of Korea), Visiting Scholar, 2015-2016
3. Dr. Richard Afolabi, Postdoctor, 2015
4. Prof. Cheeyang Song (Kyungpook National University, South Korea), Visiting Scholar, 2014-2015
5. Prof. Jinho Ahn (Kyonggi University, South Korea), Visiting Scholar, 2014
6. Dr. Yan Jin, Postdoctor, 2008-2010
7. Prof. Hyejung Jung (PyeongTaek University, South Korea), Visiting Scholar, 2008-2009
8. Mr. Tatsuya Suto (Japan Patent Office), Visiting Scholar, 2007-2008
9. Dr. Wei Ren, Postdoctor, 2006-2007
10. Dr. Ahmed Abd El Al, Postdoctor, 2005

ACADAEMIC SERVICES AT UNLV

▪	Spring 2016 – present	(College of Engineering)	Cybersecurity Ed. Working Group member
▪	Fall 2015	(College of Engineering)	Strategic Planning Task Force
▪	Fall 2015	(University)	From R2PC to Top Tier: Graduate Enrollment Management, Department Representative
▪	Spring 2014, 2015	(College of Engineering)	New Student Orientation Speaker
▪	Spring 2014 – present	(College of Engineering)	UAS Working Group Coordinator
▪	Spring 2013 – present	(College of Engineering)	Internship Committee member & Computer Science Internship advisor
▪	Fall 2013	(University)	IT Master Planning reviewer
▪	Fall 2013	(College of Engineering)	UAS Minor Program Development committee
▪	Spring 2012	(Dept. of Computer Science)	Faculty Search Committee Chair
▪	Fall 2008 – present	(Dept. of Computer Science)	Ph.D. qualifying exam committee
▪	Spring 2008	(Dept. of Computer Science)	Assisted ABET accreditation process
▪	Spring 2006 – present	(Dept. of Computer Science)	CS Honor Society UPE Advisor
▪	Fall 2006 – Spring 2008	(Faculty Senate)	Academic Standard Committee
▪	Fall 2006 – Spring 2008	(Faculty Senate)	Program Review Committee
▪	Fall 2006 – Spring 2008	(Graduate Council)	Curriculum Committee
▪	Fall 2006 – Spring 2008	(Graduate Council)	New Programs Committee

- Fall 2005 – present   (Dept. of Computer Science)   Director of Computer Security Lab
- Fall 2005 – Spring 2006   (Dept. of Computer Science)   Faculty Search Committee
- Fall 2004 – present   (Dept. of Computer Science)   Graduate Committee
- Fall 2004 – Fall 2008   (Dept. of Computer Science)   Colloquium Coordinator
- Fall 2004 – Spring 2005   (Dept. of Computer Science)   Space and Equipment Committee

PROFESSIONAL SOCIETY MEMBERSHIP

1. IEEE member (1995 ~), IEEE Las Vegas section member and publicity chair (2005)
2. ISACA (Information Systems Audit and Control Association) member, Las Vegas Chapter (2012 ~)
3. InfraGard (Partnership between FBI and private sector) member, Las Vegas Chapter (2010 ~ 2015)
4. KSEA (Korean-American Scientists and Engineers Association) member (1996 ~), Membership Director (2010 ~ 2011)
5. KOCSEA (Korean Computer Scientists and Engineers Association in America), member (2006 ~), Vice-President (2010), President (2011)

PROFESSIONAL SERVICES

Conferences & Research Group Organization

1. Chair, CIT (Computer Science and IT Technologies) Symposium, KSEA UKC 2016 (Korean-American Scientists and Engineers Association, US-Korea Conference), Dallas, TX, 2016
2. Coordinator, UAS for Public Safety Working Group, Las Vegas, NV, 2015 –2016
3. Organizer, ISVC 2014, Special Track, Las Vegas, NV, 2014
4. Committee member, ACM SAC SGST Track, 2013
5. Executive Director, KSEA UKC 2012, Los Angeles, CA
6. President, KOCSEA (Korean Computer Scientists and Engineers Association in America) Technical Symposium 2011, San Jose, CA
7. General Chair, KOCSEA Technical Symposium 2010, Washington, DC
8. Program Chair, KOCSEA Technical Symposium 2009, Las Vegas, NV
9. Program Chair, Internet and Wireless Security Track, ITNG 2007, Las Vegas, NV, Apr 2-4, 2007
10. Session Chair, Wireless Sensor Networks, IEEE CCNC 2007, Las Vegas, NV Jan 11-13, 2007
11. Vice Program Chair, Security & Fault Tolerance Track, EUC 2006 (IFIP International Conference on Embedded and Ubiquitous Computing), Seoul, Korea, Aug 1-4, 2006
12. Program Chair, Internet and Wireless Security Track, ITNG 2006, Las Vegas, NV, Apr 10-12, 2006
13. Committee member, SecUbiq 2005 (International Workshop on Security in Ubiquitous Computing Systems), Nagasaki, Japan, Dec 6-9, 2005
14. Track chair, Wireless Ad Hoc/Sensor Networks and Network Security Track, IEEE ITCC 2005, Las Vegas, NV, Apr 4-6, 2005

Journal Editorship

1. Editorial Board Member for a book, "Information Assurance and Security Technologies for Risk Assessment and Threat Management: Advances", by IGI, 2011
2. Served as a Guest Editor for International Journal of Information Technology, Vol. 11, No. 2, 2005

Paper / Proposal Review

1. Proposal review
   - NSF CyberCorps(R) Scholarship for Service (SFS) Program Panel Reviewer, 2016
   - NSF SSE & SSI Program Ad-hoc Reviewer, 2014

2. Journal paper review
   - IEEE Transactions on Secure and Dependable Computing (TDSC), IEEE Communications Letters, IEEE Communications magazine, IEEE Computer magazine, IEEE Journal of Selected Areas In Communications – Special Issue on Network Security, KSII Transactions on Internet and Information Systems, KIISE Journal, International Journal of Computer and Information Science (IJCIS), International Journal of Security and Networks (IJSN), International Journal on Artificial Intelligence Tools, International Journal of Computer Science and Network Security, Special Issue on Telecommunication Systems, Journal of Applied Mathematics, Journal of Information, International Journal of Ubiquitous Computing (IJUC), Sensors Journal, International Journal of Networked and Distributed Computing (IJNDC), IBM Journal, Journal of Intelligent Service Robotics (IJSR), Journal of Applied Computing and Informatics, International Journal of Transportation Science and Technology

3. Conference paper review
   - IEEE Tencon 2005, SecUbiq 2005, ICC 2006 & 2007, EUC 2006, CISSE 2006, SERA 2007, HICSS 2010, CSIIRW 2011, TrustCom 2011, i-JET 2012, CSIIRW 2012, ACM Smart Grid Symposium 2012, ACM SAC 2014 & 2014, ICUAS 2014 & 2016, ISVC 2015, IEEE PIMRC 2015, HICSS 2016

4. Book chapter review
   - "Green IT: Technologies and Applications" by Springer, "Handbook of Research in Wireless Security" by Idea Group Research, "Security in Wireless Mesh Network" by Auerbach Publications, CRC Press

Standards committee

1. NEMA DICOS standard working group for TDR (Threat Detection Report), 2011-2012

AWARDS

1. Outstanding Researcher of 2014, Dept. of Computer Science, UNLV, Apr. 2015
2. Best Teacher of the Year nominee, College of Engineering, UNLV, Apr. 2011
3. Outstanding SCS Teacher for 2007, School of Computer Science, UNLV, April 2008
4. Outstanding SCS Researcher for 2005, School of Computer Science, UNLV, April 2006
5. Recognition of Excellence award, Lucent Technologies, Whippany, NJ, Feb. 1999
6. Best presenter of the year award, KSEA 11th Annual Tech Conference, Cleveland, OH, May 1997

OTHER ACTIVITIES

1. Holding an amateur radio Technician license since 1996 (Call sign: KC8FHF)
2. A student pilot (flown in Cessna 150 and Cessna 172)

CITIZENSHIP

United States