

YAN (LINDSAY) SUN

Associate Professor

Department of Electrical, Computer, and Biomedical Engineering
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Education

Ph.D., Department of Electrical and Computer Engineering, University of Maryland, College Park, Maryland, August 2004.

M.S., Department of Electrical and Computer Engineering, University of Maryland, College Park, Maryland, May 2003.

B.S., Department of Electronics, Peking University, Beijing, China, June 1998.

Research Interests

Information and Network Security, Cyber-Physical System Security, Trustworthy Social Computing, Trust and Reputation Management, Power Grid Security,

Awards and Honors

- ♦ Best Paper Award, for the paper entitled “The Sequential Attack against Power Grid Networks”, IEEE International Conference on Communications (ICC) 2014.
- ♦ Best Paper Award, for the paper entitled “Anomaly Detection in Feedback-based Reputation Systems through Temporal and Correlation Analysis”, IEEE International Conference on Social Computing (SocialCom) 2010.
- ♦ NSF Faculty Early Career Development (CAREER) Award, February 2007.
- ♦ WISE Fellowship, for attending Women’s Institute in Summer Enrichment (WISE) program at the University of California, Berkeley, June 2007.
- ♦ NSF Travel Award, for participating IEEE INFOCOM’04 in Hong Kong, March 2004.

Research Experiences

Associate Professor, July 2010 - present

Department of Electrical, Computer and Biomedical Engineering, University of Rhode Island

Research Areas:

- ♦ Power Grid Security
- ♦ Trustworthy Social Computing
- ♦ Trustworthy Cyber-Physical Systems

Assistant Professor, July 2004 – July 2010

Department of Electrical, Computer and Biomedical Engineering, University of Rhode Island

Research Areas:

- ♦ Information and Network Security
- ♦ Trust Management
- ♦ Trustworthy Biomedical Systems

Teaching Experiences

Curriculum Development

- ◆ **Fall 2014 URI Honors Colloquium:** Together with Dr. Edmund Lamagna, Dr. Lisa Dipippo and Dr. Victor Faye Wolf, developed the full curriculum including the speaker list for *Fall 2014 URI Honors Colloquium: Cybersecurity and Personal Privacy* (<http://www.uri.edu/hc/>). Each Tuesday night seminar has attracted 500-700 attendees,
- ◆ **URI Cyber Security and Forensics Center:** Together with Dr. Lisa Dipippo and Dr. Victor Faye Wolf, developed and revised courses according to the requirements from National Security Agency (NSA). In 2012, the URI Cyber Security and Forensics Center has obtained the NSA certificate for *National Centers of Academic Excellence in Information*.
- ◆ **Course Development:** Developed an undergraduate course: ELE438/CSC418 -Information and Network Security.

Teaching, University of Rhode Island

HPR 201 – Honors Colloquium – Cybersecurity and Privacy, 2014
 ELE601/602 – Graduate Seminar, 2013
 ELE438 – Information and Network Security, Spring 2007 – 2014.
 ELE437 – Computer Communications, Fall 2008 - 2014
 ELE492/ELE594 – Information and Network Security, Spring 2005
 ELE491 – Information and Network Security, Spring 2006
 ELE305 – Introduction to Computer Architecture, Fall 2006, 2007

Research-oriented Advising

Yongbo Zeng, PhD student (2012-present)
 Yihai Zhu, PhD (2011-will graduate in Dec 2014)
 Yuhong Liu, PhD (2007-2012, graduated in August 2012)
 Xuan Li, PhD student (2007- graduate in August 2012), co-advisor.
 Qinyuan Feng, PhD student (2007- graduated in May 2012), co-advisor.
 Wenkai Wang, PhD (2007-2011, graduated in December 2011)
 Yafei Yang, PhD (2004-2008, graduated in December 2008)

Zhi Dou, MS (2014 - present)
 Ridhab Al Kinani (2013 – present)
 Nitish Reddy Busannagari, MS student (2009-2010)
 Gema Vinueles, exchange student from Spain (2007-2008)
 Greg Fellow, MS student (2006-2007, graduated in May 2007)
 Javier Escayola, exchange student (2005)
 Robert Power, Undergraduate (2005-2006)
 Westley Laquerre, Undergraduate (2004)

Professional Activities

- ◆ Editor-in-Chief of SIGPORT, term 01/01/2015 – 12/31/2017, appointed by Vice President of IEEE Signal Processing Society.
- ◆ Elected member of Information and Forensics and Security Technical Committee, IEEE Signal Processing Society, term: 01/01/2012 – 12/31/2014.

- ◆ IEEE Signal Processing Society's representative on the IEEE Security and Privacy Magazine Steering Committee, term: 01/01/2013 – 12/31/2015, appointed by the President of IEEE Signal Processing Society.
- ◆ Associate Editor, IEEE Signal Processing Letter, 2013-2015, appointed by the editor-in-chief of IEEE Signal Processing Letter.
- ◆ Associate Editor (eNews), IEEE Signal Processing Magazine, 2010- 2014, appointed by the editor-in-chief of IEEE Signal Processing Magazine.
- ◆ Workshop/Conference Chair or Organizers
 - *General Chair*, IEEE Workshop on Information Forensics and Security (WIFS) 2014
 - *Tutorial Session Chair*, IEEE Workshop on Information Forensics and Security (WIFS) 2013
 - *Finance Chair*, 2012 IEEE International Workshop on Multimedia Signal Processing (MMSp 2012), 2012.
 - *Organizing committee member*, Seasonal School on Social Media Processing, sponsored by the IEEE Signal Processing Society Seasonal School in Signal Processing (S3P) Program, Sydney, Australia, 9-12 July 2012.
 - *Co-Chair*, Track of Trust, Reputation, Evidence and other Collaboration Know-how (TRECK), the 25th ACM Symposium on Applied Computing (ACM SAC'10), Sierre, Switzerland, March 2010.
 - *Publication Chair*, Fourth Annual Boston Area Architecture Workshop (BARC), February. 2006.
 - *Local Arrangement Chair*, IEEE International Workshop on Genomic Signal Processing and Statistics (Gensips), 2005.

◆ Technical Program Committees

Social Informatics'14	-2014 ASE International Conference on Social Informatics
MMSP'13	- IEEE 15 th International Workshop on Multimedia Signal Processing
ChinaSIP'13	-2013 IEEE China Summit & International Conference on Signal and Information Processing
Social Infomatics'12	- 2012 ASE/IEEE International Conference on Social Informatics
SocialCom'12	- ASE/IEEE International Conference on Social Computing
WIFS'12	- IEEE International Workshop on Information Forensics and Security
ACM SAC TRECK'12	- Track of Trust, Reputation, Evidence and other Collaboration Know-how (TRECK), the 27th ACM Symposium on Applied Computing
INFOCOM'11	- IEEE, the 30th Conference on Computer Communications
GLOBECOM'11	- The 53rd Annual IEEE Global Communications Conference
INFOCOM'10	- IEEE, the 29th Conference on Computer Communications
UC-SEC'09	- The 2009 International Workshop on Ubiquitous Computing Security
INFOCOM'09	- IEEE, the 28th Conference on Computer Communications
ICCCN'09	- The 18th International Conference on Computer Communications and Networks, Network Security and Privacy Track
GLOBECOM'09	- The 51st Annual IEEE Global Communications Conference
TRAM'08	- IEEE ICDCS Workshop, 2 nd International Workshop on Trust and Reputation Management in Massively Distributed Computing Systems
SPEUCS'07	- ACM Workshop on Security for Emerging Ubiquitous Wireless Networks
GLOBECOM'07	- The 50th Annual IEEE Global Communication Conference
MSN'06	- The 2 nd Int. Conference on Mobile Ad-hoc and Sensor Networks
CHINACOM'06	- The 1 st Int. Conference on Communications and Networking in China
GLOBECOM'05	- The 48th Annual IEEE Global Communication Conference
BROADNET'05	- Broadband Wireless Networking Symposium

◆ Guest Editor

- Special Issue on Privacy and Trust Management in Cloud and Distributed Systems, IEEE Transactions on Information Forensics and Security, June 2013
- Special Issue on Signal and Information Processing for Social Learning and Networking, IEEE Signal Processing Magazine, March 2012
- Special Issue on Wireless Network Security, Wiley's Journal of Wireless Communications and Mobile Computing. May 2005.

◆ Referee for Journals

- IEEE Transactions on Information Forensics and Security, 2007 – 2014
- IEEE Journal of Selected Topics in Signal Processing, 2014
- IEEE Transactions on Wireless Communications, 2004 – 2008, 2013

- IEEE Transactions on Parallel and Distributed Systems, 2013
- IEEE Transactions on Mobile Computing, 2009
- IEEE Transactions on Fuzzy Systems, 2008
- IEEE/ACM Transactions on Networking, 2008
- IEEE Transactions on Multimedia, 2002
- IEEE Journal on Selected Areas in Communications, 2004, 2007, 2011
- IEEE Journal of Selected Topics in Signal Processing, 2010, 2013
- IEEE Wireless Communications Magazine, 2013
- IEEE Signal Processing Magazine, 2011
- IEEE Communication Magazine, 2004-2007
- IEEE Multimedia, 2005
- IEEE Signal Processing Letters, 2009, 2012
- EURASIP Journal on Wireless Communications and Networking, 2007, 2009
- Wireless Networks, The Journal of Mobile Communication, Computation and Information, 2009
- Wiley's International Journal of Communication Systems, 2008
- International Journal of Security and Networks (IJSN), 2005
- International Journal of Computers and Applications, 2003

Tutorials, Invited Talks and Panels

Tutorials:

- ♦ “Multimedia Social Networks: Behavior Dynamics, Security, and Beyond”, given together with Dr. H.V. Zhao at 2010 IEEE International Conferences on Acoustics, Speech and Signal Processing (ICASSP 2010), March 2010.
- ♦ “Tutorial on Wireless Multicast Security”, Network/Computer Security Workshop 2006, Lehigh University, May 2006.

Panel:

- ♦ “Security and Privacy for Emerging Wireless Networks”, Research Review Day at WINLAB, Rutgers University, NJ, May 22, 2007.

Invited Talks:

- ♦ “Anomaly Detection in Online Reputation Systems”, at the First Young Investigator Conference (EITC-YIC 2011), Harvard University, Aug 2011.
- ♦ “Understanding Cascading Failures in the U.S. Power Grid”, Cybersecurity Symposium, University of Rhode Island, April 2011.
- ♦ “Keeping Online Ratings Honest”, Brown University, December 2010.
- ♦ “Defending Online Reputation Systems against Collaborative Unfair Raters”, University of Delaware, October 2009.
- ♦ “Defending Online Reputation Systems against Collaborative Unfair Raters through Signal Modeling and Trust”, University of Massachusetts Lowell, October 2009.
- ♦ “Trust Establishment: Theories and Applications”, University of Connecticut, March 2008.
- ♦ “Formalizing Trust in Mobile Wireless Networks”, Research Review Day at WINLAB (Wireless Information Network Laboratory), Rutgers University, May 22, 2007.
- ♦ “Trust Modeling and Evaluation in Distributed Networks”, IEEE Providence Sector, April 19, 2007.

- ◆ “Trust Establishment in Distributed Networks: Vulnerability and Defense ”, University of Massachusetts Dartmouth, February 2007
- ◆ “Trust Model in Ad hoc networks”, 19th IEEE Annual Computer Communications Workshop, Bonita Springs, FL, October 2004.
- ◆ “Securing Group Dynamic Membership Information over Multicast”, HKUST Networking Workshop, Hong Kong University of Science and Technology, Hong Kong, March 2004.

Recent Local Community Services

- ◆ Education Chair, Chinese Culture Club at URI.
- Organizing weekly Chinese language classes for children (age 3 - 9).
- ◆ Board Member, Rhode Island Association of Chinese Americans (RIACA)
- ◆ Vice Chair of 2014 RIACA Scholarship Committee
- A total of \$21,000 scholarship were awarded to 11 high school students in June 2014.

Recent Media Coverage

- ◆ “URI professor looks to unmask fake reviews”, Providence Business News, April 14, 2014
- ◆ “Bringing Honesty to E-Commerce”, URI News, March 2014.
- ◆ “Cybersecurity experts warn target data breach only the beginning”, Providence Journal, Feb 1, 2014.
- ◆ “Be on the front-line of cyberdefense”, URI Big Story, May 2, 2013
- ◆ “URI receives \$640,000 grant to support underrepresented students in STEM fields”, URI News Release, April 9, 2013

Affiliations

Member, Institute of Electrical and Electronics Engineers (IEEE)

Member, IEEE Women in Engineering

Publications

[Book]



Yan Sun, Wade Trappe, K. J. Ray Liu, “Network-Aware Security for Group Communications”, ISBN 978-0-387-68846-6, Springer, Oct. 2007.

[Refereed Book Chapters]

Yan Sun and Zhu Han, “Trusted Cooperative Transmission: Turn a Security Weakness into Security Enhancement”, in Securing Wireless Communications at the Physical Layer, Eds, Wade Trappe and Ruoheng Liu, ISBN 978-1-4419-1384-5, Springer, 2010.

[Refereed Journal Articles]**Recent Journal Publications** (not considered for the previous promotion)

1. Yihai Zhu, Jun Yan, Yufei Tang, Yan (Lindsay) Sun, Haibo He, "Joint Substation-Transmission line Vulnerability Assessment against the Smart Grid", accepted, *IEEE Trans. on Information Forensics and Security (TIFS)*, acceptance notified in Oct 2014
2. Yihai Zhu, Jun Yan, Yufei Tang, Yan (Lindsay) Sun, Haibo He, "Resilience Analysis of Power Grids under the Sequential Attack", accepted, *IEEE Trans. on Information Forensics and Security (TIFS)*, acceptance notified in Oct 2014
3. Amari Zonouz, Liudong Xing, Vinod Vokkarane, Yan (Lindsay) Sun, "Reliability-Oriented Single-Path Routing Protocols in Wireless Sensor Networks", *IEEE Sensors Journal*, Vol 14, No. 11, pp 4059-4068, June 2014. **(One of the 25 most downloaded Sensors Journal papers in the month of July 2014, certified by IEEE Sensors Council)**
4. Amari Zonouz, Liudong Xing, Vinod Vokkarane, Yan (Lindsay) Sun, "Application Communication Reliability of Wireless Sensor Networks," *IET Wireless Sensor Systems*, in press, doi: 10.1049/iet-wss.2013.0107
5. Younghun Chae, Lisa DiPippo, Yan (Lindsay) Sun, "Trust Management for Defending On-off Attacks", *IEEE Transactions on Parallel and Distributed Systems*, in press, doi: 10.1109/TPDS.2014.2317719
6. Jun Yan, Yufei Tang, Haibo He, and Yan (Lindsay) Sun, "Cascading Failure Analysis with DC Power Flow Model and Transient Stability Analysis", *IEEE Transactions on Power Systems*, Vol. pp, No. 90, pp 1-13, May 2014.
7. Yihai Zhu, Jun Yan, Yan (Lindsay) Sun, Haibo He, "Revealing Cascading Failure Vulnerability in Power Grids using Risk-Graph", *IEEE Trans. on Parallel and Distributed Systems*, Vol pp, No. 99, pp 1-12, January 2014
8. Jun Yan, Haibo He, Yan (Lindsay) Sun, "Integrated Security Analysis on Cascading Failure in Complex Networks", *IEEE Transactions on Information Forensics and Security*, Vol 9, No. 3, pp 451-463, March 2014.
9. Chaonan Wang, Liudong Xing, Vinod M. Vokkarane, and Yan (Lindsay) Sun, "Reliability and Lifetime Modeling of Wireless Sensor Nodes", *Microelectronics Reliability*, Vol 54, No. 1, pp 160-166, January 2014.
10. Yuhong Liu and Yan (Lindsay) Sun, "Securing Digital Reputation in Online Social Media", *IEEE Signal Processing Magazine*, Vol 31, No. 1, pp 149 – 155, January, 2014.
11. Jun Yan, Yihai Zhu, Haibo He, and Yan (Lindsay) Sun "Multi-contingency Cascading Analysis of Smart Grid based on Self-organizing Map", *IEEE Transactions on Information Forensics & Security*, Vol 8, No. 4, pp 646-656, April 2013.
12. Yuhong Liu, Yan (Lindsay) Sun, Siyuan Liu, and Alex C. Kot, "Securing Online Reputation Systems through Trust Modeling and Temporal Analysis", *IEEE Transactions on Information Forensics and Security*, special issue on Privacy and Trust Management in Cloud and Distributed Systems, Vol 8, No. 6, pp.936-948, June 2013.
13. Zhou Yuan, Zhu Han, Yan (Lindsay) Sun, Husheng Li and Jubin Song, "Routing-Toward-Primary-User Attack and Belief Propagation Based Defense in Cognitive Radio Networks", *IEEE Transactions on Mobile Computing*, Vol. 12, No. 9, pp1750-1760, September 2013.

14. Yan (Lindsay) Sun and Yuhong Liu, "Security of Online Reputation Systems: Evolution of Attacks and Defenses", *IEEE Signal Processing Magazine*, Vol. 29, No. 2, pp.87-97, March 2012.
15. Akhilesh Shrestha, L. Xing, Yan (Lindsay) Sun, and Vinod M. Vokkarane, "Infrastructure Communication Reliability of Wireless Sensor Networks Considering Common-Cause Failures," *International Journal of Performability Engineering*, special issue on Dependability of Wireless Systems and Networks, Vol. 8, No. 2, pp. 141-150, March 2012.
16. Chaonan Wang, L. Xing, Vinod Vokkarane, and Yan (Lindsay) Sun, "Reliability of Wireless Sensor Networks with Tree Topology," *International Journal of Performability Engineering*, Vol. 8, No. 2, pp. 213-216, March 2012.
17. Makeyev O., Liu X., Luna-Munguía H., Rogel-Salazar G., Mucio-Ramirez S., Liu Y., Sun Y., Kay S., Besio W., "Toward a noninvasive automatic seizure control system in rats with transcranial focal stimulations via tripolar concentric ring electrodes", *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, Vol 20, No. 4, pp. 422-431, July 2012.
18. Makeyev O., Liu X., Luna-Munguía H., Rogel-Salazar G., Mucio-Ramirez S., Liu Y., Sun Y., Hadidi R., Kay S., Besio W., "Toward an automatic seizure control system in rats through transcranial focal stimulation via tripolar concentric ring electrodes", *Epilepsy Currents*, Vol. 12, Issue s1, January/February 2012, pp. 29-30.
19. Xiaorong Zhang, Yuhong Liu, Fan Zhang, Jin Ren, Yan (Lindsay) Sun, Qing Yang, and Huang He, "On Design and Implementation of Neural-Machine Interface for Artificial Legs", *IEEE Transactions on Industrial Informatics*, Vol. 8, No. 2, pp 418-429, May 2012.
20. He Huang, Fan Zhang, Yan (Lindsay) Sun and Haibo He, "Design of a Robust EMG Sensing Interface for Pattern Classification", *Journal of Neural Engineering*, Vol. 7, No. 5, 2010.
21. Qinyuan Feng, Yan (Lindsay) Sun, Ling Liu, Yafei Yang, Yafei Dai, "Voting Systems with Trust Mechanisms in Cyberspace: Vulnerabilities and Defenses", *IEEE Transactions on Knowledge & Data Engineering*, Vol. 22, No. 12, pp. 1766-1780, December 2010.
22. Wenkai Wang, Husheng Li, Yan (Lindsay) Sun, and Zhu Han, "Securing Collaborative Spectrum Sensing against Untrustworthy Secondary Users in Cognitive Radio Networks", *EURASIP Journal on Advances in Signal Processing*, vol. 2010, Article ID 695750, November 22 2009
23. L. Xing, P. Boddu, Yan (Lindsay) Sun, and W. Wang, "Reliability Analysis of Static and Dynamic Fault-Tolerant Systems subject to Probabilistic Common-Cause Failures, Proc IMechE, Part O: *Journal of Risk and Reliability*, Vol. 224, No. 1, pp.43-53, March 2010

More Journal Publications:

24. Yafei Yang, Yan (Lindsay) Sun, Steven Kay, and Qing Yang, "Securing Rating Aggregation Systems using Statistical Detectors and Trust", *IEEE Transactions on Information Forensics and Security*, vol. 4, no. 4, pp.883-898, December 2009.
25. Zhu Han and Yan (Lindsay) Sun, "Distributed Cooperative Transmission with Unreliable and Distrustful Relay Channels", *EURASIP Journal on Wireless Communications and Networking*", EURASIP Vol. 2009, Article ID 740912, December 21 2009
26. Yafei Yang, Qinyuan Feng, Yan (Lindsay) Sun and Yafei Dai, "Dishonest Behaviors in Online Rating Systems: Cyber Competition, Attack Models and Attack Generator", *Journal of Computer Science Technology, Special Issues on Trust and Reputation Management in Future Computing Systems and Applications*, vol. 24, no. 5, pp. 855-865, September 2009.

27. Yan (Lindsay) Sun, Zhu Han, and K. J. Ray Liu, "Defense of Trust Management Vulnerabilities in Distributed Networks", *IEEE Communications Magazine, Feature Topic on Security in Mobile Ad Hoc and Sensor Networks*, vol. 46, no. 2, pp.112-119, February 2008.
28. Yan Sun, and K. J. Ray Liu, "Hierarchical Group Access Control for Secure Multicast Communications", *IEEE/ACM Transactions on Networking*, vol. 15, no. 6, pp.1514-1526, December 2007.
29. Yan Sun and K. J. Ray Liu, "Analysis and Protection of Dynamic Membership Information for Group Key Distribution Schemes", *IEEE Transactions on Information Forensics and Security*, vol. 2, no. 2, pp.213-226, June 2007.
30. Wei Yu, Yan Sun, and K. J. Ray Liu, "Optimizing Rekeying Cost for Contributory Group Key Agreement Schemes", *IEEE Transactions on Dependable and Secure Computing*, vol. 4, no. 3, pp.228-242, July-September 2007.
31. Yan Sun, Wei Yu, Zhu Han, and K. J. Ray Liu, "Information Theoretic Framework of Trust Modeling and Evaluation for Ad Hoc Networks", *IEEE Journal on Selected Areas in Communications*, vol. 24, no. 2, pp.305- 317, Feb. 2006.
32. Y. Mao, Yan Sun, Min Wu, and K. J. Ray Liu, "JET: Dynamic Joint-Exist-Tree Amortization and Scheduling for Contributory Key Agreement", *IEEE/ACM Transactions on Networking*, vol. 14, no. 5, pp.1128-1140, Oct. 2006.
33. Charles Pandana, Yan Sun and K. J. Ray Liu, "Channel-Aware Priority Transmission Scheme using Joint Channel Estimation and Data Loading over OFDM Systems", *IEEE Transactions on Signal Processing*, vol. 53, no. 8, pp.3297-3310, August 2005.
34. Yan Sun, Wade Trappe, and K. J. Ray Liu, "A Scalable Multicast Key Management Scheme for Heterogeneous Wireless Networks", vol. 12, no. 4, pp.653-666, *IEEE/ACM Transactions on Networking*, August 2004.

Under Review:

- Yuhong Liu, Yan Sun, Jungwoo Ryoo, Syed Rizvi, Athanasios Vasilakos, "A Survey of Security and Privacy Challenges in Cloud Computing: Solutions and Future Directions", *IEEE Transactions on Cloud Computing*, submitted in Oct 2014
- Chaonan Wang, Amir Zonouz, Liudong Xing, Vinod Vokkarane, Yan (Lindsay) Sun, "Communication Reliability Analysis of Wireless Sensor Networks Using Phased-Mission Model", *IEEE Transactions on Industrial Informatics*, submitted in Aug 2014

[Refereed Conference Papers]

Recent Publications (not considered in the previous promotion)

35. Amir Zonouz, Liudong Xing, Vinod Vokkarane, and Yan Sun, "Reliability Based Optimization in Hybrid Wireless Sensor Networks ", in proc. *2015 Annual Reliability and Maintainability Symposium (RAMS)*, Palm Harbor, FL, Jan 26-29, 2015
36. Yihai Zhu, Jun Yan, Yufei Tang, Yan (Lindsay) Sun, and Haibo He, "Coordinated Attacks against Substations and Transmission Lines in Power Grids", in proc, *IEEE Global Communications Conference (GlobalCom'14)*, Austin TX, December 8-12, 2014

37. Zhen Chen, Yongbo Zeng, Gerald Hefferman, Yan (Lindsay) Sun, Tao Wei, "FiberID: Molecular-level Secret for Identification of Things", in *proc. IEEE Workshop on Information Forensics and Security (WIFS'14)*, Atlanta GA, Dec 3-5 2014
38. Euijin Cho, Ting Yu, Min Chi, Yan (Lindsay) Sun, "Revealing Implicit Communities to Incorporate into Recommender Systems", *15th ACM Conference on Economics and Computation (EC'14)*, Palo Alto, June 8-12, 2014
39. Yihai Zhu, Jun Yan, Yufei Yang, Yan (Lindsay) Sun, and Haibo He, "The Sequential Attack against Power Grid Networks", to appear, in *Proc. 2014 IEEE International Conference on Communications (ICC)*, Sydney, Australia, June 2014 (**Best Paper Award**)
40. Yongbo Zeng, Yan (Lindsay) Sun, Liudong Xing, and Vinod M. Vokkarane, "Trust-Aware Privacy Evaluation in Online Social Networks", in *Proc. 2014 IEEE International Conference on Communications (ICC)*, Sydney, Australia, June 2014
41. Xiaohui Gong, H. Vicky Zhao, Yan Lindsay Sun, "Probabilistic ranking of multi-attribute items using indifference curve", to appear, in *Proc. the 39th International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Florence, Italy, May 2014
42. Amir Ehsani Zonouz, Liudong Xing, Vinod M. Vokkarane, and Yan Lindsay Sun, "A Time-Dependent Link Failure Model for Wireless Sensor Networks," *Annual Reliability & Maintainability Symposium*, Colorado Springs, CO, January 27-30, 2014
43. Chaonan Wang, Liudong Xing, Vinod M. Vokkarane, and Yan Lindsay Sun, "A Phased-Mission Framework for Communication Reliability in WSN," *Annual Reliability & Maintainability Symposium*, Colorado Springs, CO, January 27-30, 2014
44. William J. Matuszak, Lisa DiPippo, Yan Lindsay Sun, CyberSAVE – Situational Awareness Visualization for Cyber Security of Smart Grid Systems, in *proc. 10th International Symposium on Visualization for Cyber Security (VizSec)*, Atlanta, Georgia, October 14, 2013
45. Yuhong Liu, Yan Lindsay Sun, "Can Reputation Manipulation Boost App sales in Android Market?", in *Proc. the 38th International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Vancouver, Canada, May 2013
46. Amir Ehsani Zonouz, Liudong Xing, Vinod M. Vokkarane, and Yan Lindsay Sun, "Application Communication Reliability of Wireless Sensor Networks Supporting K-coverage," *Proc. of 2013 IEEE International Conference on Distributed Computing in Sensor Systems*, Cambridge, Massachusetts, USA, pp. 430-435, May 2013.
47. Jun Yan, Yihai Zhu, Haibo He, and Yan (Lindsay) Sun, "Revealing Temporal Features of Attacks against Smart Grid," in *Proc. IEEE Innovative Smart Grid Technologies Conference (ISGT'13)*, Washington DC, February, 2013.
48. Yihai Zhu, Jun Yan, Yan (Lindsay) Sun, Haibo He, "Risk-Aware Vulnerability Analysis of Electric Grids from Attacker's Perspective", in *Proc. IEEE Innovative Smart Grid Technologies Conference (ISGT'13)*, Washington DC, February, 2013.
49. Chaonan Wang, Liudong Xing, Vinod M. Vokkarane, and Yan Lindsay Sun, "Reliability Modeling of Wireless Sensors," *Proc. of the Annual Reliability & Maintainability Symposium*, Orlando, FL, January 2013
50. Yihai Zhu, Yan (Lindsay) Sun, and Haibo He, "Load Distribution Vector Based Attack Strategies against Power Grid Systems", *IEEE GLOBECOM 2012*, Dec. 2012

51. Yuhong Liu, Yan (Lindsay) Sun, Siyuan Liu, and Alex C. Kot, "Securing Online Reputation Systems through Dempster-Shafer Theory based Trust Model", poster presentation, *2012 Annual Computer Security Applications Conference (ACSAC)*, Orlando, Florida, Dec 3-7, 2012.
52. Younghun Chae, Lisa Cingiser DiPippo¹, Yan Lindsay Sun "Predictability Trust for Wireless Sensor Networks to provide a defense against On/off attack", in *Proc. CollaborateCom(2012)*, Pittsburgh, Oct. 2012.
53. Wenkai Wang, Yan (Lindsay) Sun, and Haibo He, "Topological Analysis of Cascading Failures in Bay Area Power Grid", in *proc. 2012 IEEE PES General Meeting*, 22 - 26 July 2012, San Diego, CA, USA.
54. Amir Ehsani Zonouz, Liudong Xing, Vinod M. Vokkarane, and Yan (Lindsay) Sun, "K-coverage Reliability Evaluation for Wireless Sensor Networks," *The 18th ISSAT International Conference on Reliability and Quality*, Boston, MA, July 2012.
55. Chaonan Wang, L. Xing, Vinod M. Vokkarane, and Yan Sun, "Reliability Analysis of Wireless Sensor Networks using Different Network Topology Characteristics," *International Conference on Quality, Reliability, Risk, Maintenance, and Safety Engineering (QR2MSE2012)*, Chengdu, China, June 2012.
56. Haibo He, Jun Yan, Yida Yang, and Yan Sun, "Evaluating complex network vulnerability using self-organizing map", *16th International Conference on Cognitive and Neural Systems (ICCN)*, May-June, 2012.
57. Jun Yan, Yida Yang, Wenkai Wang, Haibo He, Yan Sun, "An Integrated Visualization Approach for Smart Grid Attacks", *International Conference on Intelligent Control and Information Processing (ICICIP 2012)*, Dalian, China, July 2012.
58. Wenkai Wang, Qian Cai, Yan Sun, and Haibo He, "Risk-aware Attacks and Catastrophic Cascading Failures in U.S. Power Grid", to appear, in *Proc. IEEE Global Communication Conference (Globecom'11)*, Houston TX, December 2011.
59. Yuhong Liu and Yan Sun, "Detecting Cheating Behaviors in Cyber Competitions by Constructing Competition Social Network", Poster Track, *IEEE Intl. Workshop on Information Forensics and Security (WIFS'11)*, Brazil, Nov. 29th-Dec. 2nd, 2011.
60. Yuhong Liu, Yan Sun, Ting Yu, "Defending Multiple-user-multiple-target Attacks in Online Reputation Systems", in *proc. the Third IEEE International Conference on Social Computing (Socialcom'11, acceptance rate 10%)*, Oct. 9-11, 2011, Boston, U.S.A
61. Yuhong Liu, Fan Zhang, Yan (Lindsay) Sun, He Huang, "Trust Sensor Interface for Improving Reliability of EMG-based User Intent Recognition", in *proc. the 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'11)*, Boston, MA, Aug-Sept, 2011.
62. W.G. Besio, X. Liu, Y. Liu, Y.L. Sun, A.V. Medvedev, and K. Koka, "Algorithm for Automatic Detection of Pentylentetrazole-Induced Seizures in Rat", in *proc. the 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'11)*, Boston, MA, Aug-Sept, 2011.
63. Wenkai Wang, Yan Sun, Husheng Li, and Zhu Han, "Cross-Layer Attack and Defense in Cognitive Radio Networks", in *Proc. IEEE Global Communication Conference (Globecom'10)*, Miami, FL, December 2010.
64. H. Huang, Y. Sun, Q. Yang, F. Zhang, X Zhang, Y. Liu, J. Ren, F. Sierra, "Integrating neuromuscular and cyber systems for neural control of artificial legs", in *Proceeding of First*

ACM/IEEE International Conference on Cyber-Physical Systems, Stockholm, Sweden, pp. 129-138, 2010.

65. Qinyuan Feng, Ling Liu, Yan Lindsay Sun, Ting Yu, Yafei Dai, “Enhancing Personalized Ranking Quality through Multidimensional Modeling of Inter-item Competition”, in Proc. *6th International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom2010)*, October 2010.
66. Yuhong Liu and Yan Lindsay Sun, “Anomaly Detection in Feedback-based Reputation Systems through Temporal and Correlation Analysis”, in Proc. *IEEE International Conference on Social Computing (SocialCom2010, acceptance rate 11%)*, August 2010. **(Best Paper Award)**

More Publications:

Topic: Trust and Reputation Systems; Security and Privacy

67. Qinyuan Feng, Yu Wu, Yan Lindsay Sun, Jing Jiang, Yafei Dai, “User Behavior Modeling in Peer-to-Peer File Sharing Networks: Dissecting Download and Removal Actions”, in Proc. *34th International Conference on Acoustics, Speech, and Signal Processing (ICASSP’09)*, 2009.
68. Weijun Xiao, He Huang, Yan Sun, and Qing Yang, “Promise of Embedded System with GPU in Artificial Leg Control: Enabling Time-frequency Feature Extraction from Electromyography”, the *31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS)*, September 2009.
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