

Jinyuan Stella Sun

CONTACT INFORMATION

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EDUCATION

- 08/2006 – 07/2010 *University of Florida* Gainesville, Florida
Ph.D. in Electrical and Computer Engineering
▪ Advisor: Professor Yuguang “Michael” Fang
- 09/2003 – 09/2005 *Ryerson University* Toronto, Canada
M.A.Sc. in Computer Networks, Department of Electrical and Computer Engineering
▪ Advisor: Professor Lian Zhao
- 09/1999 – 06/2003 *Beijing Information Science & Technology University* Beijing, China
B.Sc. in Information Systems, Department of Computer Information Systems

EMPLOYMENT

- Assistant Professor* *University of Tennessee*
Knoxville, Tennessee, USA 07/2010 – present
- Network Test Developer* *RuggedCom Inc.*
Vaughan, Ontario, Canada 10/2005 – 08/2006

RESEARCH GRANT

- 66270-CS: “InvisibleSensing: Security Through Invisibility for Dynamically Changing Wireless Sensor Networks,” Principal Investigator, Army Research Office, \$200,000, 09/2015-08/2018.
- CNS-1422665: “CSR: CAM: A Cloud-Assisted mHealth Monitoring System,” Principal Investigator, National Science Foundation, \$200,000, 10/2014-09/2017.
- EEC-1041877: “Center for Ultra-Wide-Area Resilient Electric Energy Transmission Networks (CURENT),” Participant (1.57%), National Science Foundation, \$300,000 (so far) out of \$30,500,000, 08/2011-07/2019.
- Joint Directed Research and Development (JDRD), “Weighted Multi-Factor Authentication through Behavior Learning,” Principal Investigator, Science Alliance ORNL-UTK, \$50,000, 01/2014-12/2014.

TEACHING EXPERIENCE

Assistant Professor
University of Tennessee

*Department of Electrical Engineering and
Computer Science*
2010-2015

- CS494/594: Computer and Network Security, Fall 2010
- CS494/594: Computer Communication Networks, Spring 2011
- ECE454/CS594: Computer and Network Security, Fall 2011
- ECE453/599: Computer Communication Networks, Spring 2012, Spring 2013, Spring 2014
- ECE454/599: Computer and Network Security, Fall 2012, Fall 2013, Fall 2014
- ECE692: Advanced Topics in Computer and Network Security, Spring 2015
- ECE461: Introduction to Computer Security, Fall 2015

Guest Lecturer
University of Florida

*Department of Electrical and Computer
Engineering*
2007-2009

- EEL6935: Wireless Ad Hoc Networks, Spring 2007
- EEL5718: Computer Communications, Fall 2008
- EEL6591: Wireless Networks, Spring 2008
- EEL4598: Data Computer Communications, Fall 2009

CURRENT STUDENTS

- Mr. Yingyuan Yang, Ph.D. student
- Ms. Cindy Yao, Ph.D. student
- Mr. Eric Reinsmidt, Ph.D. student
- Mr. Xiangyu Niu, Ph.D. student
- Mr. Joey Allen, Master's (thesis) student

ALUMNI

- Dr. Yue Tong, Ph.D. of Computer Engineering 2015, "Data Security and Privacy in Smart Grid".
- Ms. Tasneem Halim, M.Sc. of Computer Science 2015, "Implicit Authentication Using Topic Model".
- Mr. Jordan Deyton, M.Sc. of Computer Science 2013, "Tor Bridge Distribution Powered by Threshold RSA".
- Mr. Eugene Ng, M.Sc. of Computer Engineering 2012, "Modifying WiFi Protected Setup to Continue Allowing Non-technical People to Setup Networks Easily and Securely".

PROFESSIONAL ACTIVITIES

- Associate Editor, IEEE Transactions on Vehicular Technology (TVT), July 2014-present
- Member, IEEE and ACM

- Technical Program Committee Member for IEEE INFOCOM 2012-2016
- Technical Program Committee Member for IEEE GLOBECOM 2010-2015
- Technical Program Committee Member for IEEE CNS 2013
- Reviewer for journals and conferences including

IEEE Journal on Selected Areas in Communications, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Smart Grid, IEEE Transactions on Wireless Communications, IEEE Transactions on Vehicular Technology, Transactions on Knowledge and Data Engineering, IET Intelligent Transport Systems, Security and Communication Networks, IEEE Communication Letters, IEEE Communications Surveys and Tutorials, IEEE Transactions on Biomedical Engineering, Wireless Networks, Ad Hoc Networks, Ad Hoc & Sensor Wireless Networks, The Computer Journal, Computers and Mathematics with Applications, International Journal of Sensor Networks

IEEE INFOCOM, IEEE CNS, IEEE GLOBECOM, IEEE SECON, IEEE MILCOM, IWQoS, ACM MobiHoc, IEEE ICC, IEEE VTC, IEEE ICC, IEEE ICCVE, IEEE WCNC.

PUBLICATIONS

- **Book Chapters and Invited papers**

1. **Jinyuan Sun**, Xiaoyan Zhu, Chi Zhang and Yuguang Fang “Security and Privacy for Mobile Healthcare (m-Health) Systems,” *Handbook on Securing Cyber-Physical Infrastructure*, 2012.
2. **Jinyuan Sun** and Xiaoyan Zhu, “Data Privacy and Secure Storage for Electronic Health Record,” invited paper, *IEEE E-Letter of Multimedia Communications Technical Committee (MMTC)*, 2012.

- **Journal Papers**

1. Yue Tong, **Jinyuan Sun**, Kai Sun, and Pan Li, “Secure outsourcing of power system dynamic simulation leveraging cloud computing,” extended abstract accepted by *IEEE Transactions on Smart Grid (TSG) (Special Issue on High Performance Computing (HPC) Applications for a More Resilient and Efficient Power Grid)*, 2015.
2. Yanmin Gong, Chi Zhang, Yuguang Fang, and **Jinyuan Sun**, “Protecting location privacy for task allocation in ad hoc mobile cloud computing,” to appear in *IEEE Transactions on Emerging Topics in Computing*, 2015.
3. M. Li, S. Salinas. P. Li, **J. Sun**, and X. Huang, “MAC-Layer Selfish Misbehavior in IEEE 802.11 Ad Hoc Networks: Detection and Defense,” *IEEE Transactions on Mobile Computing (TMC)*, Vol. 14, No. 6, pp. 1203-1217, August 2014.
4. Yue Tong, **Jinyuan Sun**, Sherman S. M. Chow, and Pan Li, “Cloud-assisted Mobile-access of Health Data with Privacy and Auditability,” *IEEE Journal of Biomedical and Health Informatics (JBHI)*, Vol. 18, No. 2, pp. 419-429, March 2014.
5. Yue Tong, Jordan Deyton, **Jinyuan Sun** and Fangxing Li, “S³A: A Secure Data Sharing Mechanism for Situational Awareness in The Power Grid,” *IEEE Transactions on Smart Grid (TSG)*, Vol. 4, No. 4, pp. 1751-1759, 2013.
6. Linke Guo, Chi Zhang, **Jinyuan Sun** and Yuguang Fang, “A Privacy-Preserving Attribute-based Authentication System for Mobile Health Networks,” *IEEE Transactions on Mobile Computing (TMC)*, PrePrints, 2013.

7. Rui Zhang, Jinxue Zhang, Yanchao Zhang, **Jinyuan Sun** and Guanhua Yan, "Privacy-preserving profile matching for proximity-based mobile social networking," *Journal on Selected Areas in Communications (JSAC)*, Vol. 31, No. 9, pp. 656-668, 2013.
8. Rui Zhang, Jing Shi, Yanchao Zhang and **Jinyuan Sun**, "Secure Cooperative Data Storage and Query Processing in Unattended Tiered Sensor Networks," *IEEE Journal on Selected Areas in Communications (JSAC)*, vol. 30, no. 2, pp. 433-441, 2012.
9. **Jinyuan Sun**, Xiaoyan Zhu, Chi Zhang and Yuguang Fang, "RescueMe: location-based secure and dependable VANETs for disaster rescue," *IEEE Journal on Selected Areas in Communications (JSAC)*, vol. 29, no. 3, pp. 659-669, 2011.
10. Miao Pan, **Jinyuan Sun** and Yuguang Fang, "Purging the back-room dealing: secure spectrum auction leveraging Paillier cryptosystem," *IEEE Journal on Selected Areas in Communications (JSAC)*, vol. 29, no. 4, pp. 866-876, 2011.
11. **Jinyuan Sun**, Chi Zhang, Yanchao Zhang, and Yuguang Fang, "SAT: A security architecture achieving anonymity and traceability in wireless mesh networks," *IEEE Transactions on Dependable and Secure Computing (TDSC)*, vol. 8, no. 2, pp. 295-307, 2011.
12. **Jinyuan Sun**, Chi Zhang, Yanchao Zhang and Yuguang Fang, "An identity-based security system for user privacy in vehicular ad hoc networks," *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, vol. 21, no. 9, pp. 1227-1239, 2010.
13. **Jinyuan Sun** and Yuguang Fang, "Cross-Domain data sharing in distributed electronic-health-record system," *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, vol. 21, no. 6, pp. 754-764, 2010.
14. **Jinyuan Sun**, Xiaoyan Zhu, and Yuguang Fang, "Privacy and emergency response in e-healthcare leveraging wireless body sensor networks," *IEEE Wireless Communications*, vol. 17, no. 1, pp. 66-73, 2010.
15. Chi Zhang, **Jinyuan Sun**, Xiaoyan Zhu and Yuguang Fang, "Privacy and security for online social networks: challenges and opportunities," *IEEE Network*, vol. 24, no. 4, pp. 13-18, 2010.
16. **Jinyuan Sun** and Yuguang Fang, "Defense against misbehavior in anonymous vehicular ad hoc networks," *Ad Hoc Networks (Special Issue on Privacy and Security in Wireless Sensor and Ad Hoc Networks)*, vol. 7, no. 8, pp. 1515-1525, 2009.
17. **Jinyuan Sun**, Lian Zhao, and Alagan Anpalagan, "Cross-layer design and analysis of down-link communication in cellular CDMA systems," *EURASIP Journal on Wireless Communications and Networking (Special Issue on Radio Resource Management in 3G+ Wireless Systems)*, vol. 2006, no. 2, pp. 1-23, 2006.

▪ **Conference Papers**

1. Yue Tong, **Jinyuan Sun**, Kai Sun, and Pan Li, "Outsourcing power system simulations," *IEEE Global Communications Conference (GlobeCom'15)*, Dec. 2015.
2. Yue Tong, **Jinyuan Sun**, and Kai Sun, "Privacy-preserving spectral estimation in smart grid," *IEEE International Conference on Smart Grid Communications (SmartGridComm'15)*, Nov. 2015.
3. Yingyuan Yang, **Jinyuan Sun**, and Pan Li, "Model retraining and dynamic privilege-based access control for implicit authentication systems," *IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS'15)*, Oct. 2015.
4. Xiangyu Niu, **Jinyuan Sun**, and Husheng Li, "Network steganography based on traffic behavior in dynamically changing wireless sensor networks," *IEEE International Conference on Communications (ICC'15)*, Jun. 2015.

5. M. Yu, K. Yang, L. Wei, C. Zhang and **Jinyuan Sun**, "Practical Private Information Retrieval Supporting Keyword Search in the Cloud," *2014 International Conference on Wireless Communications and Signal Processing*, Oct. 2014.
6. X. Jin, L. Wei, M. Yu, N. Yu and **Jinyuan Sun**, "Anonymous Duplication of Encrypted Data with Proof of Ownership in Cloud Storage," *IEEE/CIC International Conference on Communications in China (ICCC): QRS: QoS, Reliability and Security*, Dec. 2013.
7. Yue Tong, **Jinyuan Sun**, Sherman Chow and Pan Li, "Towards Auditable Cloud-Assisted Access of Encrypted Health Data," *IEEE Conference on Communications and Network Security (CNS), 4th International Workshop on Security and Privacy in Cloud Computing (SPCC)*, Oct. 2013.
8. L. Wei, C. Zhang, K. Chen, B. Liu and **Jinyuan Sun**, "A Small Step for Hardware, A Giant Leap for VANET Security," *Internal Conference on Computer Communications and Networks (ICCCN)*, Jul. 2013.
9. Ming Li, Pan Li, Miao Pan and **Jinyuan Sun**, "Economic-Robust Transmission Opportunity Auction in Multi-hop Wireless Networks," *IEEE International Conference on Computer Communications (INFOCOM'13)*, Apr. 2013.
10. Linke Guo, Chi Zhang, **Jinyuan Sun** and Yuguang Fang "PAAS: A Privacy-Preserving Attribute-based Authentication System for eHealth Networks," *IEEE International Conference on Distributed Computing Systems (ICDCS'12)*, Jun. 2012.
11. Rui Zhang, Yanchao Zhang, **Jinyuan Sun** and Guanhua Yan "Fine-grained private matching for proximity-based mobile social networking," *IEEE International Conference on Computer Communication (INFOCOM'12)*, Mar. 2012.
12. Rui Zhang, Yunzhong Liu, Yanchao Zhang and **Jinyuan Sun**, "Fast identification of the missing tags in a large RFID system," *IEEE Communications Society Conference on Sensor, Mesh, and Ad Hoc Communications and Networks (SECON'11)*, Jul. 2011.
13. **Jinyuan Sun**, Xiaoyan Zhu, Chi Zhang and Yuguang Fang, "HCPP: cryptography based secure EHR system for patient privacy and emergency healthcare," *IEEE International Conference on Distributed Computing Systems (ICDCS'11)*, Jun. 2011.
14. **Jinyuan Sun**, Xiaoyan Zhu and Yuguang Fang, "Preserving privacy in emergency response based on wireless body sensor networks," *IEEE Global Communications Conference (GlobeCom'10)*, Dec. 2010.
15. **Jinyuan Sun**, Xiaoyan Zhu, and Yuguang Fang, "A privacy-preserving scheme for online social networks with efficient revocation," *IEEE International Conference on Computer Communication (INFOCOM'10)*, Mar. 2010.
16. **Jinyuan Sun**, Chi Zhang, and Yuguang Fang, "A defense technique against misbehavior in VANETs based on threshold authentication," *IEEE Military Communications Conference (MILCOM'08)*, Nov. 2008.
17. **Jinyuan Sun**, Chi Zhang, and Yuguang Fang, "A security architecture achieving anonymity and traceability in wireless mesh networks," *IEEE International Conference on Computer Communication (INFOCOM'08)*, Apr. 2008.
18. **Jinyuan Sun**, Chi Zhang, and Yuguang Fang, "An id-based framework achieving privacy and non-repudiation in vehicular ad hoc networks," *IEEE Military Communications Conference (MILCOM'07)*, Oct. 2007.

19. **Jinyuan Sun**, Lian Zhao, and Alagan Anpalagan, "An adaptive prioritizing based soft hand-off algorithm for downlink call admission control of next-generation cellular CDMA networks," *IEEE International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC)*, Sep. 2005.
20. **Jinyuan Sun**, Lian Zhao, and Alagan Anpalagan, "A unified framework for adaptive scheduling hybrid voice/data traffic in 3G cellular CDMA systems," *IEEE Wireless Networking, Communications and Mobile Computing*, Jun. 2005.
21. **Jinyuan Sun**, Yifan Peng, and Lian Zhao, "A novel packet scheduling scheme based on adaptive power/delay for efficient resource allocation in downlink CDMA systems," *IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)*, May 2005.