

COMPREHENSIVE PROFESSIONAL VITAE

NAME: Fu Xinwen
(last) (first) (middle)

Department(s): Computer Science

College(s) or Service Unit(s): Sciences

Institute: University of Massachusetts Lowell

Rank or Title: Professor

Field: Computer Security and Privacy

1. EDUCATION AND ACADEMIC QUALIFICATIONS

1. Education

2005	Ph.D. in Computer Engineering	Texas A&M University, TX, U.S.A.
1998	M.S. in Electrical Engineering	University of Science and Technology of China
1995	B.S. in Electrical Engineering	Xi'an Jiaotong University, China

2. Academic Experience

9/17-Present	Professor	Department of Computer Science, University of Massachusetts Lowell
8/17-8/19	Associate Professor	Department of Computer Science, University of Central Florida
9/12-8/17	Associate Professor	Department of Computer Science, University of Massachusetts Lowell
9/12-6/13	Associate Chair	Department of Computer Science, University of Massachusetts Lowell
9/08-8/12	Assistant Professor	Department of Computer Science, University of Massachusetts Lowell
8/05-8/08	Assistant Professor	College of Business and Information Systems, Dakota State University

3. Academic Honors and Awards

2019	Best paper award	IEEE International Conference on Industrial Internet (ICII)
2017	Best paper award	International Conference on Wireless Algorithms, Systems, and Applications (WASA)
2016	Teaching Excellence	Department of Computer Science, UMass Lowell
2016	Best paper award	International Performance Computing and Communications Conference (IPCCC)
2016	Award of Excellence	GeekPwn 2016 Ethic Smart Life Hack Competition

2016	Erich Spengler Student Cyber Paper Award, with students	The Colloquium for Information Security Education (CISSE)
2013	Best paper award	IEEE International Conference on Communications (ICC): Communications and Information Security (CIS) Symposium
2013	Best paper award	International Conference on Wireless Algorithms, Systems, and Applications (WASA)
2011	Teaching Excellence Award	Department of Computer Science, UMass Lowell
2008	Best paper award	International Conference on Communications (ICC) -- Information and Network Security Symposium

B. PROFESSIONAL ACTIVITIES

1. Professional Association Participation

2003 - present Member of Institute of Electrical and Electronics Engineers (IEEE)

2. Conference Program Committee Member

(Committee members are by invitation only. Duties include reviewing submitted papers, discussing reviews, and participating in the acceptance decision process.)

- 2020 IEEE International Conference on Computer Communications (INFOCOM)
- 2019 IEEE International Conference on Computer Communications (INFOCOM)
- 2019 IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS)
- 2018 IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS)
- 2018 IEEE International Conference on Computer Communications (INFOCOM)
- 2017 IEEE Global Communications Conference (GLOBECOM), Communication and Information Systems Security Symposium (CISS)
- 2017 IEEE Global Communications Conference (GLOBECOM), Communication and Information Systems Security Symposium (CISS)
- 2016 ACM Conference on Computer and Communications Security (CCS)
- 2016 International Conference on Computer Communication and Networks (ICCCN)
- 2016 The International Conference on Wireless Algorithms, Systems, and Applications (WASA)
- 2016 IEEE Conference on Communications and Network Security (CNS)
- 2016 IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS)
- 2016 IEEE Conference on Computer Communications (Infocom)
- 2015 IEEE Conference on Computer Communications (Infocom)
- 2014 IEEE Conference on Computer Communications (Infocom)
- 2015 IEEE Global Communications Conference (GLOBECOM), Communication and Information Systems Security Symposium (CISS)
- 2014 IEEE Global Communications Conference (GLOBECOM), Communication and Information Systems Security Symposium (CISS)
- 2013 Privacy Enhancing Technologies Symposium (PET)

2013 IEEE Conference on Computer Communications (Infocom)
 2013 IEEE Conference on Communications and Network Security (CNS)
 2013 IEEE Global Communications Conference (GLOBECOM), Communication and Information Systems Security Symposium (CISS)
 2013 IEEE Global Communications Conference (GLOBECOM), Next Generation Networking Symposium (NGN)
 2013 28th IEEE International Conference on Distributed Computing Systems (ICDCS), Wireless, Mobile, Sensors, and Ubiquitous Computing
 2012 IEEE Global Communications Conference (GLOBECOM), Communication and Information Systems Security Symposium (CISS)
 2012 IEEE Conference on Computer Communications (Infocom)
 2012 IEEE Global Communications Conference (GLOBECOM), Next Generation Networking and Internet Symposium (NGNI)
 2012 IEEE International Conference on Communications (ICC), Communications and Information Systems Security Symposium (CISS)
 2012 International Conference on Computing, Networking and Communications (ICNC)
 2011 IEEE International Conference on Communications (ICC), Communications and Information Systems Security Symposium (CISS)
 2011 International ICST Conference on Security and Privacy in Communication Networks (SecureComm)
 2011 IEEE Global Communications Conference (GLOBECOM), Communication and System Security (CSS)
 2011 IEEE Symposium on Personal, Indoor, Mobile and Radio Communications (PIMRC)
 2010 International Conference on Parallel Processing (ICPP)
 2010 IEEE International Symposium on Dependable, Autonomic and Secure Computing (DASC)
 2010 Hawaiian International Conference on System Sciences (HICSS)
 2009 Sixth IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS)
 2009 The International Conference on Wireless Algorithms, Systems, and Applications (WASA)
 2009 International Conference on Network and System Security (NSS)
 2009 IEEE Wireless Communications and Networking Conference (WCNC)
 2009 The World Congress in Computer Science, Computer Engineering, and Applied Computing (UCSEC)
 2008 28th IEEE International Conference on Distributed Computing Systems (ICDCS)
 2008 IEEE International Conference on Parallel and Distributed Systems (ICPADS)
 2008 Conference on Communications and Networking in China (CHINACOM)
 2008 International Workshop on Security of Computer Communications and Networks (SoCCaN)
 2008 International Wireless Communication and Mobile Computing Conference (IWCMC)
 2008 International Conference on Autonomic and Trusted Computing (ATC)
 2007 International Workshop on Forensics for Future Generation Communication Environments (F2GC)
 2007 Communication, Network, and Information Security (CNIS)
 2007 International Conference on Intelligent Computing (ICIC)
 2007 International Conference on Autonomic and Trusted Computing (ATC)

- 2007 International Wireless Communications and Mobile Computing Conference (IWCMC)
- 2007 IEEE International Symposium on Ubisafe Computing (UbiSafe)
- 2007 International Conference on i-Warfare and Security (ICIW)
- 2007 International Conference on Embedded Software and Systems (ICISS)
- 2006 The IEEE International Symposium on Network Computing and Applications (NCA), Workshop on Trustworthy Network Computing
- 2006 The International Conference on High Performance Computing and Communications (HPCC)
- 2006 Pervasive Computing Applications & Security Service (PCASS)
- 2006 International Workshop on Trustworthiness, Reliability and services in Ubiquitous and Sensor neTworks (TRUST)
- 2006 International Conference on Computational Science and its Applications (ICCSA), Technical Session: Ubiquitous Application & Security Service (UASS)
- 2006 IEEE International Conference on Advanced Information Networking and Applications (AINA)
- 2006 IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing

3. Journal Referee

- 2018 IEEE/ACM Transactions on Networking (TON), IEEE Journal on Internet of Things (IoT-J)
- 2017 IEEE/ACM Transactions on Networking (TON), Transactions on Information Forensics & Security (TIFS), IEEE Transactions on Mobile Computing (TMC)
- 2016 ACM Transactions on Privacy and Security (TISSEC), Transactions on Dependable and Secure Computing (TDSC), ACM Transactions on Cyber-Physical Systems (TCPS), IEEE Transactions on Vehicular Technology (TVT), IEEE Transactions on Cloud Computing (TCC)
- 2015 Computer Networks, Elsevier, IEEE Transactions on Computers (TC), IEEE Transactions on IEEE Transactions on Mobile Computing (TMC), Security and Communication Networks (SCN), IEEE Transactions on Vehicular Technology, IEEE/ACM Transactions on Networking, IEEE Network Magazine
- 2014 Computer Networks, Elsevier, IEEE Transactions on Control of Network Systems, IEEE Transactions on Parallel and Distributed Systems, Security and Communication Networks (SCN), IEEE Transactions on Reliability, IEEE Transactions on Vehicular Technology, IEEE/ACM Transactions on Networking
- 2013 IEEE Transactions on Communications, Computer Networks (Elsevier)
- 2012 IEEE Transactions on Sensor Networks, Transactions on Information Forensics & Security (TIFS)
- 2011 IEEE's Transactions on Parallel and Distributed Systems (TPDS), IEEE Transactions on Dependable and Secure Computing (TDSC), ACM Transactions on Sensor Networks, Transactions on Information Forensics & Security (TIFS), IEEE Transactions on Computers (TC), Computer Networks – Elsevier (COMNET), Frontiers of Computer Science (FCS), International Journal of Security and Networks (IJSN), Journal of Network and Systems Management (JON), Journal of Network and Systems Management (JNSM)

- 2010 Transactions on Information Forensics & Security (TIFS), IEEE Transactions on Vehicular Technology (TVT), IEEE Communications Letters, Computer Networks – Elsevier (COMNET), Journal of Network and Systems Management (JONS), Journal of Network and Computer Applications (JNCA), Journal of Parallel and Distributed Computing (JPDC), Journal of Network and Systems Management (JNSM)
- 2009 IEEE Communications Letters, Computer Networks – Elsevier (COMNET), Security and Communication Networks (SCN)
- 2008 IEEE Transactions on Wireless Communications (TWC), Computer Networks – Elsevier (COMNET), Ad Hoc Networks - Elsevier, Security and Communication Networks (SCN), International Journal of Security and Networks (IJSN), EURASIP Journal on Wireless Communications and Networking (JWCN)
- 2007 IEEE Transactions on Wireless Communication (TWC), Computer Networks – Elsevier (COMNET), IEEE Communications Magazine, Wireless Communications and Mobile Computing (WCM), International Journal of Smart Home (IJSH), Computers and Electrical Engineering Journal (C&EE), International Journal of Performability Engineering (IJPE), Mathematical and Computer Modeling
- 2006 IEEE Transactions on Wireless Communication (TWC), Computer Networks – Elsevier (COMNET), International Journal of Computers and Applications

4. Organization Committee

- 2019 **Co-General Chair**, SecureComm 2019 - 15th EAI International Conference on Security and Privacy in Communication Networks, October 23-25, 2019, Orlando, United State
Responsibilities: Organize the meetings with the program chairs, publicity chairs and other organization committee members to ensure the conference moves smoothly on schedule.
- 2018 **Co-General Chairs**, 37th IEEE International Performance Computing and Communications Conference (IPCCC)
Responsibilities: Organize the meetings with the program chairs, publicity chairs and other organization committee members to ensure the conference moves smoothly on schedule.
- 2017 **Guest editor**, International Journal of Distributed Sensor Networks (IJDSN), Special Collection on End-to-End IoT Security and Privacy
Responsibilities: Define scope of the special issue, prepare and disseminate Call for Paper, obtain reviews for the submitted manuscripts, determine accepted papers.
- 2016 **Symposium Co-chair**, Communications and Information Security Symposium, International Conference on Computing, Networking and Communications (ICNC) 2017
Responsibilities: Prepare and disseminate Call for Paper, invite and confirm TPC members, coordinate paper review, select accepted papers and best paper awards, propose candidates for keynote speech, propose authors for invited papers.
- 2016 **Program Co-chair**, IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom) 2016

- Responsibilities:** Prepare and disseminate Call for Paper, invite and confirm TPC members, coordinate paper review, select accepted papers and best paper awards, propose candidates for keynote speech, propose authors for invited papers.
- 2015 **Program Co-chair**, Workshop on Privacy-Aware Mobile Computing (PAMCO), 2015, in conjunction with Mobihoc 2015.
Responsibilities: Prepare and disseminate Call for Paper, invite and confirm TPC members, coordinate paper review, select accepted papers and best paper awards, propose candidates for keynote speech, propose authors for invited papers.
- 2015 **Symposium Co-chair**, Communications and Information Security (CIS), International Conference on Computing, Networking and Communications (ICNC) 2015
Responsibilities: Prepare and disseminate Call for Paper, invite and confirm TPC members, coordinate paper review, select accepted papers and best paper awards, propose candidates for keynote speech, propose authors for invited papers.
- 2012 **Program Co-chair**, International Workshop on Network Forensics, Security and Privacy (NFSP), in conjunction with ICDCS 2012.
Responsibilities: Prepare and disseminate Call for Paper, invite and confirm TPC members, coordinate paper review, select accepted papers and best paper awards, propose candidates for keynote speech, propose authors for invited papers.
- 2011 **TPC Co-chair**, Communications & System Security Symposium, IEEE Global Communications Conference (GLOBECOM).
Responsibilities: Prepare and disseminate Call for Paper, invite and confirm TPC members, coordinate paper review, select accepted papers and best paper awards, propose candidates for keynote speech, propose authors for invited papers.
- 2010 **TPC co-chair**, the Sixth IEEE/IFIP International Symposium on Trusted Computing and Communications (TrustCom), 2010.
Responsibilities: Prepare and disseminate Call for Paper, invite and confirm TPC members, coordinate paper review, select accepted papers and best paper awards, propose candidates for keynote speech, propose authors for invited papers.
- 2010 **Session Chair**, IEEE Infocom.
Responsibilities: Introduce the speakers for the session, ensure the session proceeds according to schedule, facilitate a dialogue between presenters and audience while maintaining a friendly and relaxed environment.
- 2009 **Session Chair**, IEEE Infocom.
Responsibilities: Introduce the speakers for the session, ensure the session proceeds according to schedule, facilitate a dialogue between presenters and audience while maintaining a friendly and relaxed environment.
- 2007 **Program Vice-Chair**, the IEEE International Symposium on Ubiquitous Computing and Intelligence.
Responsibilities: Prepare and disseminate Call for Paper, invite and confirm TPC members, coordinate paper review, select accepted papers and best paper awards, propose candidates for keynote speech, propose authors for invited papers.
- 2006 **Guest editor**, Journal of Ubiquitous Computing and Intelligence (JUCI), Special issue: Advances in Ubiquitous Networking and Intelligent System.
Responsibilities: Define scope of the special issue, prepare and disseminate Call for Paper, obtain reviews for the submitted manuscripts, determine accepted papers.

- 2006 **Guest Editorial Board of Information Sciences** (IS) Journal, Special Issue on Security Services and Applications in Intelligent Environments
Responsibilities: Define scope of the special issue, prepare and disseminate Call for Paper, obtain reviews for the submitted manuscripts, determine accepted papers.

C. RESEARCH

1. Grants and Contracts

a. External grants (\$3,790,661 as PI / \$8,735,964)

1. Title: Building Intelligence with Layered Defense using Security-Constrained Optimization and Security Risk Detection (BUILD-SOS), (PI: Qun Zhou, **Co-PIs:** George Atia, Zhihua Qu, Wei Sun and **Xinwen Fu**) Duration: 3/20 – 2/23, Amount: \$3.75 million (\$3 million from DOE and \$0.75 million from our cost share (in-kind or cash))
2. Title: [CPS: Medium: A Secure, Trustworthy, and Reliable Air Quality Monitoring System for Smart and Connected Communities](#), (**PI: Xinwen Fu**, Co-PIs: Deliang Fan, Haofei Yu, Kelly Stevens, Thomas Bryer), Source: NSF, Duration: 10/19 – 9/22, Amount: \$1,198,111
3. Title: [SaTC: EDU: Collaborative: Building a Low-cost and State-of-the-art IoT Security Hands-on Laboratory](#), (**PI: Xinwen Fu**, Co-PIs: Cliff Zou, Yan Solihin), Source: NSF, Duration: 10/19 – 9/22, Amount: \$ 340,175/\$490,175
4. Title: An IoT Security and Privacy Course Built upon Frontier Research, Industry Need and Affordable Platforms for Classrooms, (**PI: Xinwen Fu**), Source: NSA, Duration: 3/2017 - 2/2018, Amount: \$131,350
5. Title: CICI: Regional: New England Cybersecurity Operation and Research Center (CORE), (**PI: Xinwen Fu**), Co-PIs: Lawrence Wilson, Benyuan Liu, Yan Luo), Source: NSF, Duration: 1/2017 - 12/2018, Amount: \$508,480
6. Title: CICI: Secure Data Architecture: STREAMS: Secure Transport and REsearch Architecture for Monitoring Stroke Recovery, (PI: Yan Luo, **Co-PIs:** Martin Margala, **Xinwen Fu**, Yu Cao), Source: NSF, Duration: 1/2016 - 12/2018, Amount: \$499,858
7. Title: HCISec - Enhancing Undergraduate Research in Modern Human Computer Interaction (HCI) Security and Privacy, (**PI: Xinwen Fu**, Co-PI: Kate Saenko), Source: NSF, Duration: 6/2015 - 5/2018, Amount: \$249,676
8. Title: I-Corps: Commercialization Feasibility Research and Demonstration Preparation for Third-Party Localization Toolkits, (**PI: Xinwen Fu**), Source: NSF, Duration: 10/2012 - 3/2013, Amount: \$50,000
9. Title: TC: Small: Collaborative Research: Membership Inference in a Differentially Private World and Beyond (**PI: Xinwen Fu**), Source: NSF, Duration: 9/2011 - 8/2014, Amount: \$166,123 / \$495,254
10. Title: II-New: A Network Forensics Lab for Integrated Research and Education at University of Massachusetts Lowell (**PI: Xinwen Fu**; Co-PIs: Benyuan Liu, Jie Wang), Source: NSF, Duration: 3/2010 - 2/2013, Amount: \$500,278

11. Title: Creating Learning Materials and Strategies for Network Forensics Education (**PI: Xinwen Fu**; Co-PI: Benyuan Liu), Source: NSF, Duration: 8/2010 - 7/2012, Amount: \$188,314
12. Title: Collaborative Research: EAGER: Novel Theoretical Foundation for Wireless Positioning in Challenging Environments (**PI: Xinwen Fu**), Source: NSF, Duration: 9/2009 - 7/2012, Amount: \$75,000 / \$150,000
13. Title: Collaborative Research: WN: Proper Location Identification in Wireless Networks (**PI: Xinwen Fu**), Source: NSF, Duration: 9/2007 - 8/2010; REU Supplement Duration: 9/2009 - 8/2010, Amount: \$214,147 / \$636,811; REU Supplement Amount \$16,000
14. Title: MRI: Acquisition of Equipment to Establish an Information Assurance Infrastructure for Research and Education at Dakota State University (**PI: Xinwen Fu**; Co-PIs: Steven Graham, Kevin Streff, Thomas Halverson), Source: NSF, Duration: 8/2007 - 7/2010, Amount: \$120,557
15. Title: Effectively and Efficiently Tracking Malicious Use of Anonymous Communication (**PI: Xinwen Fu**), Source: South Dakota Governor Individual Research Seed Grant Program, Duration: 9/2006 - 9/2007, Amount: \$48,450

b. Internal grants

1. Title: Cyber Crime Scene Investigation: Classification and System, Source: University of Massachusetts Lowell, Duration: 6/1/15 6/30/17, Amount: \$10,000
2. Title: Building National Centers of Academic Excellence in Cyber Defense, Source: UMassOnline, Duration: 3/2015 - 8/2015, Amount: \$10,000
3. Title: Center for Cyber Forensics, Source: University of Massachusetts Lowell, Duration: 9/2010 - present, Amount: \$31,000 plus tuition and fees
4. Title: A New Replay Attack Against Anonymous Communication Networks, Source: Faculty Research Initiative Grant at Dakota State University, Duration: 10/2007 - 5/2008, Amount: \$1,000
5. Title: Traffice Analysis Attacks and Countermeasures, Source: Proposal Initiative Award at Dakota State University, Duration: 3/2007 - 6/2007, Amount: \$500
6. Title: Improving TCP Performance in Flow Based Anonymous Communication Networks, Source: Faculty Research Initiative Grant at Dakota State University, Duration: 3/2007 - 6/2007, Amount: \$500
7. Title: Measuring and Improving Anonymous Network Performance, Source: Student Research Initiative Awards at Dakota State University, Duration: 10/2006 - 5/2007, Supervised Student: Jie Yu, Amount: \$300
8. Title: Faculty Research Initiative Grants - Camouflaging Virtual Honeypots (PI), Source: Dakota State University, Duration: 10/2005 - 5/2006, Amount: \$1,000
9. Title: Political Data Mining and Voter Decision Support Systems: Implementation and Security Research, Source: Student Research Initiative Awards at Dakota State University, Duration: 10/2005 - 5/2006, Supervised Student: Ivan Ven Osdel, Amount: \$500

2. Academic and Professional Publications

a. Book

1. Xinwen Fu, *Traffic Analysis Attacks and Countermeasures: Pattern Recognition Based Methodology*, VDM Publishing, ISBN: 978-3-639-14777-3, 2009

b. Book Chapters

1. Zhen Ling, Yiling Xu, Yier Jin, Cliff Zou and Xinwen Fu, New Variants of Mirai and Analysis, *Encyclopedia of Wireless Networks*, First Online: 10 April 2020, DOI: https://doi.org/10.1007/978-3-319-32903-1_174-1
2. Yue Zhang, Jian Weng, Rajib Dey, and Xinwen Fu, Bluetooth Low Energy (BLE) Security and Privacy, *Encyclopedia of Wireless Networks*, 24 September 2019
3. Xinwen Fu, S. Graham, and Y. Guan, Location Privacy in Wireless Networks, *Handbook on Mobile Ad Hoc and Pervasive Communications*, American Scientific Publishers, 2012
4. Xin Jin, Min Dan, Nan Zhang, Wei Yu, Xinwen Fu, and Sajal K. Das, “Game Theory for Infrastructure Security – The Power of Intent-Based Adversary Models”, Book Chapter, *Handbook on Securing Cyber-Physical Critical Infrastructure*, Elsevier Inc., ISBN 9780124158153, Jan. 31 2012
5. Xinyu Yang, Jie Lin, Wei Yu, Xinwen Fu, Genshe Chen, and Erik P. Blasch, “On Situational Aware En-route Filtering against Injected False Data in Cyber Physical Networks,”. Book Chapter, *Situational Awareness in Computer Network Defense: Principles, Methods and Applications*, IGI-Global, January 2012
6. Wei Yu, Nan Zhang, Xinwen Fu, and Brian Rivera, “Evolution of Widely-Spreading Worms and Countermeasures: Epidemic Theory and Application,” Book Chapter, *Handbook on Securing Cyber-physical Infrastructures: Foundations and Challenges*, Elsevier Inc., ISBN 9780124158153, Jan. 31 2012
7. Steven Graham, Bin Lu and Xinwen Fu, Network Security Fundamentals, Book chapter, *Encyclopedia of Computer Science and Engineering*, John Wiley & Sons, Inc., 2008

c. Refereed Journal Publications

(Students authors supervised or co-supervised by Dr. Fu are shown in bold.)

1. Zhen Ling, Chao Gao, Chuta Sano, Chukpozohn Toe, Zupei Li and Xinwen Fu, STIR: A Smart and Trustworthy IoT System Interconnecting Legacy IR Devices, *IEEE Internet of Things Journal (IoT-J)*, 7(5), Page(s): 3958 - 3967, May 2020. DOI: 10.1109/JIOT.2019.2963767
2. Qingyu Yang, Donghe Li, Dou An, Wei Yu, Xinwen Fu, Xinyu Yang, and Wei Zhao, Towards Incentive for Electrical Vehicles Demand Response with Location Privacy Guaranteeing in Microgrids, *Transactions on Dependable and Secure Computing (TDSC)*, Accepted 2020
3. Bo Liu, Xiangguo Sun, Zeyang Ni, Jiuxin Cao, Junzhou Luo, Benyuan Liu, Xinwen Fu, Co-Detection of crowdturfing microblogs and spammers in online social networks, *World Wide Web (WWW)*, 23(1): 573-607, 2020
4. Donghe Li, Qingyu Yang, Dou An, Wei Yu, Xinyu Yang, and Xinwen Fu, On Location Privacy-Preserving Online Double Auction for Electric Vehicles in Microgrids. *IEEE Internet of Things Journal* 6(4): 5902-5915, 2019

5. Zhongjie Ba, Zhan Qin, Xinwen Fu and Kui Ren, CIM: Camera in Motion for Smartphone Authentication, *Transactions on Information Forensics & Security (TIFS)*, 14(11): 2987-3002, 2019
6. Naixuan Guo, Junzhou Luo, Zhen Ling, Ming Yang, Wenjia Wu, Xinwen Fu: Your clicks reveal your secrets: a novel user-device linking method through network and visual data. *Multimedia Tools Appl.* 78(7): 8337-8362, 2019
7. Bo Liu, Zeyang Ni, Junzhou Luo, Jiuxin Cao, Xudong Ni, Benyuan Liu and Xinwen Fu, Analysis of and defense against crowd-retweeting based spam in social networks, *World Wide Web (WWW)*, *World Wide Web* 22(6): 2953-2975, 2019
8. **Lan Luo**, Yue Zhang, **Bryan Pearson**, Zhen Ling, Haofei Yu, Xinwen Fu, "On the Security and Data Integrity of Low-cost Sensor Networks for Air Quality Monitoring", accepted to appear in *Sensors*, November 2018.
9. Dazhong Wu, Anqi Ren, Wenhui Zhang, Feifei Fan, Peng Liu, Xinwen Fu, Janis Terpenney, Cybersecurity for digital manufacturing, *Journal of Manufacturing Systems*, 4 April 2018
10. Fan Liang, Wei Yu, Dou An, Qingyu Yang, Xinwen Fu, Wei Zhao: A Survey on Big Data Market: Pricing, Trading and Protection. *IEEE Access* 6: 15132-15154 (February 16, 2018)
11. Dou An, Qingyu Yang, Wei Yu, Xinyu Yang, Xinwen Fu, Wei Zhao: SODA: Strategy-Proof Online Double Auction Scheme for Multimicrogrids Bidding. *IEEE Trans. Systems, Man, and Cybernetics: Systems* 48(7): 1177-1190 (2018)
12. Zhen Ling, Junzhou Luo, Yiling Xu, **Chao Gao**, Kui Wu, Xinwen Fu, "Security Vulnerabilities of Internet of Things: A Case Study of the Smart Plug System", *IEEE Internet of Things Journal (IoT-J)*, Volume: 4, Issue: 6, Dec. 2017
13. Dou An ; Qingyu Yang; Wei Yu; Xinyu Yang; *Xinwen Fu*; Wei Zhao, Sto2Auc: A Stochastic Optimal Bidding Strategy for Microgrids, *IEEE Internet of Things Journal (IoT-J)*, Volume: 4, Issue: 6, Dec. 2017
14. Zhen Ling, Melanie Borgeest, **Chuta Sano**, Jazmyn Fuller, Anthony Cuomo, Sirong Lin, Wei Yu, Xinwen Fu, and Wei Zhao, "Privacy Enhancing Keyboard (PEK): Design, Implementation and Usability Testing", *Wireless Communications and Mobile Computing (WCMC)*, November 2017
15. Jie Lin, Wei Yu, Xinyu Yang, Qingyu Yang, Xinwen Fu, Wei Zhao: A Real-Time En-Route Route Guidance Decision Scheme for Transportation-Based Cyberphysical Systems. *IEEE Transactions on Vehicular Technology (TVT)*, 66(3): 2551-2566 (MARCH 2017)
16. **Xian Pan**, Zhen Ling, Aniket Pingley, Wei Yu, Nan Zhang, Kui Ren, Xinwen Fu: Password Extraction via Reconstructed Wireless Mouse Trajectory. *IEEE Transactions on Dependable Security Computing*, 13(4): 461-473, 2016
17. Bingsheng Zhang, Kui Ren, Guoliang Xing, Xinwen Fu, Cong Wang: SBVLC: Secure Barcode-Based Visible Light Communication for Smartphones. *IEEE Transactions on Mobile Computing*, 15(2): 432-446, 2016
18. Tao Xiang, Jianglin Sun, Xinwen Fu: On the security of binary arithmetic coding based on interval shrinking. *Multimedia Tools and Applications*. 75(8): 4245-4258 (2016)
19. Bo Liu, Jiuxin Cao, Jie Yin, Wei Yu, Benyuan Liu, Xinwen Fu: Disjoint multi mobile agent itinerary planning for big data analytics. *EURASIP Journal on Wireless Communications and Networking*, 2016: 99, 2016

20. Ming Yang, Junzhou Luo, Zhen Ling, Xinwen Fu, Wei Yu, De-anonymizing and countermeasures in anonymous communication networks, *IEEE Communications Magazine*, 53(4): 60-66, 2015
21. **Joshua Kraunelis, Yinjie Chen**, Zhen Ling, Xinwen Fu, Wei Zhao, On Malware Leveraging the Android Accessibility Framework, *EAI Endorsed Transactions on Ubiquitous Environments*, 1(4): e1, 2015
22. Guobin Xu, Wei Yu, Zhijiang Chen, Hanlin Zhang, Paul Moulema, Xinwen Fu, Chao Lu: A cloud computing based system for cyber security management. *International Journal of Power Electronics and Drive Systems (IJPEDS)*, 30(1): 29-45, 2015
23. Zhen Ling, Junzhou Luo, Wei Yu, Ming Yang, Xinwen Fu, Tor Bridge Discovery: Extensive Analysis and Large-scale Empirical Evaluation, *IEEE Transactions on Parallel Distributed System (TPDS)*, 26(7): 1887-1899, 2015
24. Xinyu Yang, Jie Lin, Wei Yu, Paul Moulema, Xinwen Fu, and Wei Zhao, A Novel En-route Filtering Scheme against False Data Injection Attacks in Cyber-Physical Networked Systems, *IEEE Transactions on Computers (TC)*, 64(1): 4-18, 2015
25. Donghai Zhu, Xinyu Yang, Wei Yu, Xinwen Fu, Network coding versus traditional routing in adversarial wireless networks. *Ad Hoc Networks* 20: 119-131, 2014
26. **Zhongli Liu**, Y. Chen, B. Liu, C. Cao, and Xinwen Fu, HAWK: An unmanned mini helicopter-based aerial wireless kit for localization, *IEEE Transactions on Mobile Computing (TMC)*, 13(2): 287-298, February, 2014, Spotlight Paper
27. Longfei Wu, Xiaojiang Du, Xinwen Fu: Security threats to mobile multimedia applications: Camera-based attacks on mobile phones. *IEEE Communications Magazine* 52(3): 80-87, 2014
28. **Bhanu Kaushik**, Honggang Zhang, Xinyu Yang, Xinwen Fu, Benyuan Liu, Jie Wang: Providing service assurance in mobile opportunistic networks. *Computer Networks*, 74: 114-140, 2014
29. Zhen Ling, Junzhou Luo, Wei Yu, Xinwen Fu, Weijia Jia, and Wei Zhao, Protocol-level Attacks against Tor, *Computer Networks*, 57(4): 869-886, 2013
30. W. Jia, F. TSO, Z. Ling, Xinwen Fu, D. Xuan and W. Yu, Blind Detection of Spread Spectrum Flow Watermarks, *Security and Communication Networks (SCN)*, 6(3): 257-274, 2013
31. Swathi Kurunji, Tingjian Ge, Xinwen Fu, Benyuan Liu, Cindy X. Chen: Optimizing Communication for Multi-Join Query Processing in Cloud Data Warehouses. *International Journal of Grid and High Performance Computing (IJGHPC)* 5(4): 113-130, 2013
32. Zhen Ling, Xinwen Fu, Weijia Jia, Wei Yu, Dong Xuan, Junzhou Luo, Novel Packet Size Based Covert Channel Attacks against Anonymizer, *IEEE Transactions on Computers (TC)*, 62(12): 2411-2426, 2013
33. Peng Zhao, Xinyu Yang, Wei Yu, Xinwen Fu: A Loose-Virtual-Clustering-Based Routing for Power Heterogeneous MANETs. *IEEE Transactions on Vehicular Technology (TVT)*, 62(5): 2290-2302, 2013
34. Ming Yang, Junzhou Luo, Lu Zhang, Xiaogang Wang, Xinwen Fu, How to block Tor's hidden bridges: detecting methods and countermeasures. *The Journal of Supercomputing* 66(3): 1285-1305, 2013

35. **Aniket Pingley**, W. Yu, N. Zhang, Xinwen Fu and W. Zhao, A Context-Aware Privacy Protection System for Location-Based Services, *Computer Networks - Elsevier*, 56(11): 2551-2568, July 2012
36. Z. Ling, J. Luo, W. Yu, Xinwen Fu, D. Xuan and W. Jia, A New Cell Counting Based Attack Against Tor, *IEEE/ACM Transactions on Networking (ToN)*, 20(4): 1245-1261, August 2012
37. X. Yang, X. Fan, W. Yu, Xinwen Fu, and Shusen Yang, HLLS: A History information based Light Location Service for MANETs, *Computer Networks - Elsevier*, 56(2), February 2012
38. Xinwen Fu, N. Zhang, A. Pingley, W. Yu, J. Wang and W. Zhao, The Digital Marauder's Map: a WiFi Forensic Positioning Tool, *IEEE Transactions on Mobile Computing (TMC)*, 11(3), March 2012
39. **Xian Pan, Junwei Huang**, Zhen Ling, Bin Lu, and Xinwen Fu, Long PN Code Based Traceback in Wireless Networks, *International Journal of Performability Engineering (IJPE)*, 8(2), March 2012
40. Yuefeng Huang, Xinyu Yang, Shuseng Yang, Wei Yu, and Xinwen Fu, A Cross Layer Approach Handling Link Asymmetry for Wireless Mesh Access Networks, *IEEE Transactions on Vehicular Technology (TVT)*, 60(3), March 2011
41. W. Yu, N. Zhang, Xinwen Fu, R. Bettati and W. Zhao, Localization Attacks to Internet Threat Monitors: Modeling and Countermeasures, *IEEE Transactions on Computers*, 59(12): 1655-1668, 2010
42. Ye Zhu, Xinwen Fu, Bryan Graham, Riccardo Bettati, Wei Zhao, Correlation-Based Traffic Analysis Attacks on Anonymity Networks, *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, 21(7): 954-967, 2010
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b. Refereed Conference Publications

(In computer networking field, conferences are highly competitive and often preferred for publications. Acceptance ratios are provided when they are available. Students authors supervised or co-supervised by Dr. Fu are shown in underlines.)

1. Yue Zhang, Jian Weng, Rajib Dey, Yier Jin, Zhiqiang Lin and **Xinwen Fu**, Breaking Secure Pairing of Bluetooth Low Energy Using Downgrade Attacks, in *Proceedings of USENIX Security*, Accepted with minor revision, August 12–14, 2020. Boston, MA, USA
2. Yue Zhang, Jian Weng, Zhen Ling, Bryan Pearson and **Xinwen Fu**, BLESS: A BLE Application Security Scanning Framework, in *Proceedings of IEEE International Conference on Computer Communications (INFOCOM)* 6-9 July 2020, Toronto, Canada
3. Chao Gao, Lan Luo, Yue Zhang, Bryan Pearson and **Xinwen Fu**, Microcontroller Based IoT System Firmware Security: Case Studies, in *Proceedings of IEEE International Conference on Industrial Internet (ICII)*, November 11-12, 2019, Orlando FL, Best paper award
4. Zhen Ling, **Zupe Li**, Chen Chen, Junzhou Luo, Wei Yu, and **Xinwen Fu**, I Know What You Enter on Gear VR, in *Proceedings of IEEE Conference on Communications and Network Security (CNS)*, 10-12 June 2019, Washington, D.C., USA.
5. Zhen Ling, Junzhou Luo, Danni Xu, Ming Yang, **Xinwen Fu**, "Novel and Practical SDN-based Traceback Technique for Malicious Traffic over Anonymous Networks", accepted to appear in *Proceedings of the 38th IEEE International Conference on Computer Communications (INFOCOM)*, Paris, France, April 29-May 2, 2019. Acceptance Rate: 19.7%
6. **Bryan Pearson**, **Lan Luo**, Yue Zhang, **Rajib Dey**, Zhen Ling, Mostafa Bassiouni and **Xinwen Fu**. "On Misconception of Hardware and Cost in IoT Security and Privacy", in *Proceedings of IEEE International Conference on Communications (ICC)*, 20-24 May 2019 - Shanghai, China.
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 12. Zhongjie Ba, Sixu Piao, Xinwen Fu, Dimitrios Koutsonikolas, Aziz Mohaisen, Kui Ren, ABC: Enabling Smartphone Authentication with Built-in Camera, in *Proceedings of etwork and Distributed System Security Symposium (NDSS)*, February 18-21, 2018, San Diego, California
 13. Zhen Ling, Luo Junzhou, Yaowen Liu and Ming Yang; Kui Wu; Xinwen Fu, SecTap: Secure Back of Device Input System for Mobile Devices, in *Proceedings of IEEE International Conference on Computer Communications (INFOCOM)*, 15-19 April 2018 Honolulu, HI USA
 14. **Chuta Sano, Chao Gao, Zupei Li**, Zhen Ling, and Xinwen Fu, Turning Legacy IR Devices into Smart IoT Devices, in *Proceedings of International Conference on Wireless Algorithms, Systems, and Applications (WASA)*, June 20-22, 2018, Tianjing, China
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45. **Yinjie Chen**, **Zhongli Liu**, Xinwen Fu, Benyuan Liu, and Wei Zhao, Theory Underlying Measurement of AOA with a Rotating Directional Antenna, in *Proceedings of IEEE*

- IEEE International Conference on Computer Communications (INFOCOM)*, 2013, Acceptance ratio: 17.4%
46. **Yinjie Chen, Zhongli Liu**, Xinwen Fu and Wei Zhao, Effective RSS Sampling for Forensic Wireless Localization, in *Proceedings of International Conference on Wireless Algorithms, Systems, and Applications (WASA)*, August 7-10, 2013, Zhangjiajie, China, **Best paper**
 47. Wei Yu, Xinwen Fu, Erik Blasch, Khanh Pham, Dan Shen, and Genshe Chen, On Effectiveness of Hopping-Based Spread Spectrum Techniques for Network Forensic Traceback, in *Proceedings of 14th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD)*, 2013
 48. Wei Yu, Sixiao Wei, Guanhui Ma, Xinwen Fu, and Nan Zhang, On Effective Localization Attacks Against Internet Threat Monitors, in *Proceedings of IEEE International Conference on Communications (ICC)*, 2013, **Best paper**
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- Proceedings of IEEE IEEE International Conference on Computer Communications (INFOCOM)*, 2011, Acceptance ratio: 16.0%
58. Zhen Ling, Xinwen Fu, Weijia Jia, Wei Yu and Dong Xuan, A Novel Packet Size Based Covert Channel Attack against Anonymizer, in *Proceedings of IEEE IEEE International Conference on Computer Communications (INFOCOM): Mini-Conference*, 2011, Acceptance ratio: 23.4%
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 60. Nan Zhang, Wei Yu, Xinwen Fu and Sajal Das, gPath: A Game-Theoretic Path Selection Algorithm to Protect Tor's Anonymity, in *Proceedings of Conference on Decision and Game Theory for Security (GameSec)*, 2010
 61. Jizhi Wang, Yinjie Chen, Xinwen Fu, Jie Wang, W. Yu and N. Zhang, 3DLoc: Three Dimensional Wireless Localization Toolkit, In *Proceedings of the 30th IEEE International Conference on Distributed Computing Systems (ICDCS)*, 2010, Acceptance ratio: 14.4%
 62. **Anwar Saipulla**, Benyuan Liu, Guoliang Xing, Xinwen Fu and Jie Wang, Barrier Coverage with Sensors of Limited Mobility, in *Proceedings of The 11th ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc)*, Chicago, USA, September 2010, Acceptance ratio: 16.9%
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 67. **Aniket Pingley**, W. Yu, N. Zhang, Xinwen Fu and W. Zhao, CAP: A Context-Aware Privacy Protection System for Location-Based Services, In *Proceedings of the 29th IEEE International Conference on Distributed Computing Systems (ICDCS)*, June 22-26, 2009 Montreal, Quebec, Canada Acceptance ratio: 16.2%
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 69. **Ryan Pries**, Wei Yu, Steve Graham, and Xinwen Fu, On Performance Bottleneck of Anonymous Communication Networks, In *Proceedings of the 22nd IEEE International Parallel and Distributed Processing Symposium (IPDPS)*, Miami, Florida, April 14-18, 2008 Acceptance ratio: 25.0%
 70. X. Wang, W. Yu, Xinwen Fu, D. Xuan, and W. Zhao, iLOC: An invisible LOCALization Attack to Internet Threat Monitoring Systems, In *Proceedings of the 27th IEEE*

- International Conference on Computer Communications (INFOCOM)*, Phoenix, AZ, April 13-28, 2008 Acceptance ratio: 20.3%
71. W. Yu, N. Zhang, Xinwen Fu, R. Bettati, and W. Zhao, On Localization Attacks to Internet Threat Monitors: An Information-Theoretic Framework, In *Proceedings of the 38th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN) - Performance and Dependability Symposium (PDS)*, June 24-27, 2008, Anchorage, Alaska, USA
 72. **Ryan Pries**, W. Yu, Xinwen Fu and W. Zhao, A New Replay Attack Against Anonymous Communication Networks, In *Proceedings of the IEEE International Conference on Communications (ICC) - Information and Network Security Symposium*, Beijing, China, May 19-23, 2008 Acceptance ratio: 36%, **Best paper**
 73. Nan Zhang, Wei Yu, Xinwen Fu, and Sajal K. Das, Towards Effective Defense Against Insider Attacks: The Establishment of Defenders Reputation, In *Proceedings of the 14th IEEE International Conference on Parallel and Distributed Systems (ICPADS)*, Melbourne, Victoria, Australia, 8th-10th December, 2008
 74. W. Yu, Xinwen Fu, Steve Graham, D. Xuan and W. Zhao, DSSS-Based Flow Marking Technique for Invisible Traceback, In *Proceedings of IEEE Symposium on Security and Privacy (S&P)*, Oakland, California, USA, May 20-23, 2007 Acceptance ratio 8.3%
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 76. Xun Wang, Wei Yu, Adam Champion, Xinwen Fu and Dong Xuan, Detecting Worms via Mining Dynamic Program Execution, In *Proceedings of the 3rd International Conference on Security and Privacy in Communication Network (SecureComm)*, September 17-20, 2007, Nice, France
 77. Xinwen Fu, W. Yu, D. Cheng, X. Tan, K. Streff, and S. Graham, On Recognizing Virtual Honeypots and Countermeasures, In *Proceedings of the IEEE International Symposium on Dependable, Autonomic and Secure Computing (DASC)*, Sep. 29-Oct. 1, 2006
 78. Kevin Streff, Anandthir Rajagopalan, and Xinwen Fu, ABC: Adaptive Bank-Transaction Camouflaging Systems, in *Proceedings of the International Conference on i-Warfare and Security (ICIW)*, University of Maryland Eastern Shore, USA, March 15-16 2006
 79. Xinwen Fu, Y. Zhu, B. Graham, R. Bettati, and Wei Zhao, On Flow Marking Attacks in Wireless Anonymous Communication Networks, in *Proceedings of the 25th International Conference on Distributed Computing Systems (ICDCS)*, June 2005, Acceptance ratio: 14%
 80. Y. Zhu, Xinwen Fu, R. Bettati, Wei Zhao, Anonymity Analysis of Mix Networks against Flow-Correlation Attacks, in *Proceedings of Global Communications Conference (GLOBECOM) - Computer & Network Security Symposium*, St. Louis, Nov. 25 ~ Dec 2, 2005, Acceptance ratio: 30%
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84. Xinwen Fu, B. Graham, R. Bettati and Wei Zhao, On Effectiveness of Link Padding for Statistical Traffic Analysis Attacks, in *Proceedings of the 23rd International Conference on Distributed Computing Systems (ICDCS)*, May 2003, Acceptance ratio: 17.7%
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86. Xinwen Fu, B. Graham, R. Bettati and Wei Zhao, Active Traffic Analysis Attacks and Countermeasures, in *Proceedings of the International Conference on Computer Networks and Mobile Computing (ICCNMC)*, Oct. 2003
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89. Xinwen Fu, M. Zhang, and X. Li, A Method of Texture Classification Based on Vector Quantization, in *Proceedings of the 9th Graphics and Image Technology Conference*, Aug. 1998

c. Refereed Workshop Publications

(In computer networking field, workshops are often highly competitive and often preferred for publications. Acceptance ratios are provided when they are available. Students authors supervised or co-supervised by Dr. Fu are shown in underlines.)

1. **Zhongli Liu, Zupei Li**, Benyuan Liu, Xinwen Fu, Ioannis Raptis and Kui Ren, Rise of Mini-Drones: Applications and Issues, in *Proceedings of the Workshop on Privacy-Aware Mobile Computing (PAMCO)*, 2015
2. **Qinggang Yue**, Zhen Ling, Wei Yu, Benyuan Liu and Xinwen Fu, Blind Recognition of Text Input on Mobile Devices via Natural Language Processing, in *Proceedings of the Workshop on Privacy-Aware Mobile Computing (PAMCO)*, 2015
3. **Bhanu Kaushik**, Maria J. Brunette, Xinwen Fu, Benyuan Liu: Customizable, scalable and reliable community-based mobile health interventions. In *Proceedings of ACM 5th International Workshop on Pervasive Wireless Healthcare (MobileHealth)*, 2014: 43-48
4. **Bhanu Kaushik**, Honggang Zhang, Xinwen Fu, Benyuan Liu and Jie Wang, "SmartParcel: A Collaborative Data Sharing Framework for Mobile Operating Systems." in *Proceedings of The 33rd International Conference on Distributed Computing Systems, The Tenth Workshop on Wireless Ad hoc and Sensor Networks (WWASN)*, 2013.

5. Junwei Huang, Yinjie Chen, Zhen Ling, Kyungseok Choo, Xinwen Fu, A Framework of Network Forensics and its Application of Locating Suspects in Wireless Crime Scene Investigation, in *Proceedings of the 7th International Workshop on Systematic Approaches to Digital Forensic Engineering (SADFE)*, Vancouver, Canada, September 28, 2012
6. Yang Zhang, P. Xia, J. Luo, Z. Ling, B. Liu and Xinwen Fu, Fingerprint Attack against Touch-enabled Devices, in *Proceedings of Annual ACM CCS Workshop on Security and Privacy in Smartphones and Mobile Devices (SPSM)*, October 2012, Acceptance ratio: 30%
7. **Junwei Huang**, Zhen Ling, Tao Xiang, Jie Wang, Xinwen Fu: When Digital Forensic Research Meets Laws. In *Proceedings of the International Workshop on Network Forensics, Security and Privacy (NFSP)*, June 2012: 542-551
8. **Yinjie Chen, Zhongli Liu**, Yong Ding and Xinwen Fu, On Sampling Signal Strength for Localization Using a Directional Antenna, In *Proceedings of IEEE International Workshop on Data Security and Privacy in wireless Networks (D-SPAN)*, June 20, 2011, Lucca, Italy
9. **William Gauvin**, Cindy Chen, Xinwen Fu, Benyuan Liu, Classification of Commercial and Personal Profiles on MySpace, in *Proceedings of 3rd IEEE International Workshop on Security and Social Networking (SESOC)*, 2011
10. Xinwen Fu, Zhen Ling, Wei Yu and Junzhou Luo, Cyber Crime Scene Investigations (C2SI) through Cloud Computing, in *Proceedings of First ICDCS Workshop on Security and Privacy in Cloud Computing (ICDCS-SPCC)*, 2010
11. **Zhongli Liu, Yinjie Chen**, Wei Yu and Xinwen Fu, Generic Network Forensic Data Acquisition from Household and Small Business Wireless Routers, in *Proceedings of First International Workshop on Data Security and Privacy in wireless Networks (D-SPAN)*, 2010
12. **William Gauvin**, Benyuan Liu, Xinwen Fu, and Jie Wang, Utopia: Providing Trusted Social Network Relationships within an Un-Trusted Environment, in *Proceedings of Workshop on Social Networks, Applications, and Systems (SNAS)*, 2009
13. Nan Zhang, Min Song, Xinwen Fu, and Wei Yu, Discovery and Protection of Sensitive Linkage Information for Online Social Networks Services, in *Proceedings of Workshop on Social Networks, Applications, and Systems (SNAS)*, 2009
14. Xinwen Fu, B. Graham, D. Xuan, R. Bettati and Wei Zhao, Empirical and Theoretical Evaluation of Active Probing Attacks and Their Countermeasures, in *Proceedings of the 6th Information Hiding Workshop (IHW)*, May 2004, Acceptance ratio 25%
15. Y. Zhu, Xinwen Fu, B. Graham, R. Bettati and Wei Zhao, On Flow Correlation Attacks and Countermeasures in Mix Networks, in *Proceedings of Workshop on Privacy Enhancing Technologies (PET)*, May 2004, Acceptance ratio 25%
16. Xinwen Fu, B. Graham, R. Bettati and Wei Zhao, On Countermeasures to Traffic Analysis Attacks, in *Proceedings of the 4th IEEE SMC Information Assurance Workshop*, Jun. 2003
17. Xinwen Fu, B. Graham, Y. Guan, R. Bettati and Wei Zhao, NetCamo: Camouflaging Network Traffic for Real-Time Applications, in *Proceedings of Texas Workshop on Security of Information Systems*, Apr. 2003

18. Xinwen Fu, Y. Guan, B. Graham, R. Bettati and Wei Zhao, Using Parasite Flows to Camouflage Flow Traffic, in *Proceedings of the 3rd IEEE SMC Information Assurance Workshop*, United States Military Academy, Jun. 2002
19. Y. Guan, Xinwen Fu, R. Bettati, and Wei Zhao, Efficient Traffic Camouflaging in Mission Critical QoS-Guaranteed Networks, in *Proceedings of the 1st IEEE SMC Information Assurance Workshop*, Jun. 2000

d. Magazine Publications

(Students authors supervised or co-supervised by Dr. Fu are shown in underlines.)

1. **Aniket Pingley**, Xian Pan, Nan Zhang, and Xinwen Fu, Bluetooth Mice Can Leak Your Passwords!, Hakin9, March Issue, 2011

e. Others

(Students authors supervised or co-supervised by Dr. Fu are shown in underlines.)

1. **Xian Pan**, Zhen Ling, Aniket Pingley, Wei Yu, Nan Zhang, Kui Ren, and Xinwen Fu, How Privacy Leaks from Bluetooth Mouse, Annual Network & Distributed System Security Symposium (NDSS), Short Talk, February 5 – 8, 2012
2. **Xian Pan**, Zhen Ling, Aniket Pingley, Wei Yu, Nan Zhang and Xinwen Fu, DEMO: How Privacy Leaks from Bluetooth Mouse, 19th ACM Conference on Computer and Communications Security Oct. 16-18, 2012, Sheraton Raleigh Hotel, Raleigh, NC, USA
3. **Zhongli Liu**, **Yinjie Chen**, Benyuan Liu, and Xinwen Fu, HAWK: An Unmanned Mini Helicopter-based Aerial Wireless Kit for Search, Rescue and Surveillance, Poster and Student Research Competition, ACM MobiCom 2011
4. Xinwen Fu, Yong Guan and Wei Zhao, Forensic Analysis Techniques for Tracing Anonymous Cyber Criminals, Position Paper, ARO Workshop on Digital Forensics, Washington D.C, Sep. 10, 2009
5. Y. Guan, Xinwen Fu, R. Bettati, and W. Zhao, Modeling and Optimizing Anonymous Communication Protocols, the 3rd Annual IEEE Information Assurance Workshop - Poster Session II, June 2002 West Point, New York
6. Y. Guan, Xinwen Fu, R. Bettati, and W. Zhao, A Quantitative Analysis of Anonymous Communications, the 10th USENIX Security Symposium - Works In Progress Session, Wahsington D.C., August 2001

3. Other Research or Creative Activities

a. Invited external talks

1. Side Channel Attacks against Mobile Devices in the Era of Stereo Cameras, Embry-Riddle Aeronautical University, Daytona Beach Campus, March 27, 2019.
2. How the Grinch Stole “Smart” Christmas!, Southeastern University, June 28, 2018.

3. An end-to-end view of IoT security and privacy, Guilin University of Electronic Technology (GUET), China, June 19, 2017
4. An end-to-end view of IoT security and privacy, Xian Jiaotong University, China, June, 2017
5. 2016 TorWard: Discovery of Malicious Traffic over Tor, Guangxi University, China, May 16, 2016
6. 2015 Privacy issues from rise of mini drones, New England Security Day (NESD), September 17, 2015
7. 2015 How to Lose Money with Mobile Banking and More!, Shanghai Jiaotong University, Shanghai, China, June 26, 2015
8. 2015 How to Classify Crimes and Investigation and A New Crime, Southeast University, Nanjing, China, June 24, 2015
9. 2014 All Mobile Devices Are Watching You, Cisco Security Conference (SecCon), Cisco Corporation, 500 Beaver Brook Rd, Boxborough, MA 01451, November 19, 2014
10. 2014 All Mobile Devices are Watching You!, Security Awareness Day - Community College of Rhode Island, Oct. 30, 2014
11. 2014 My Google Glass Sees Your Password!, Boston InfraGard meeting on Oct. 16, 2014, at UMass President's Office in Shrewsbury MA
12. 2014 All Mobile Devices are Watching Your Password!, China Internet Security Conference (ISC) 2014 on Sep. 24, 2014, Beijing China
13. 2013 Effective RSS Sampling for Forensic Wireless Localization, College of Computer Science and Engineering Seminar, Southeast University, China
14. 2012 Third Party Wireless Localization: Theory and Implementation, Ericsson Research, San Jose, CA, Mar. 16, 2012
15. 2012 Third Party Wireless Localization: Theory and Implementation, HP Labs, Palo Alto, CA, Apr. 13, 2012
16. 2011 CSI-WLAN: Wireless Network Crime Scene Investigation, Department of Electrical and Computer Engineering Seminar, Illinois Institute of Technology (IIT), Chicago, IL, April 29, 2011
17. 2011 Wireless Network Crime Scene Investigation, College of Computer Science and Engineering Seminar, Southeast University, China, April 18, 2011

18. 2010 3DLoc: Three Dimensional Wireless Localization Toolkit for Network Forensics, Computer Science & Engineering (CSE) Department Seminar, University of Connecticut, April 9, 2010
19. 2010 3DLoc: Three Dimensional Wireless Localization Toolkit for Network Forensics, Electrical and Computer Engineering Department Colloquia, University of Massachusetts Dartmouth, Mar. 26, 2010
20. 2010 3DLoc: Three Dimensional Wireless Localization Toolkit for Network Forensics, Department of Computer Science Seminar, George Washington University, Mar. 3, 2010
21. 2009 A New Cell Counter Based Attack against Tor, ECE Graduate Seminar Lecture Series, Worcester Polytechnic Institute (WPI), Nov. 6, 2009
22. 2009 A New Cell Counter Based Attack against Tor (Are Equal-sized Cells Equal?), Department of Computing, Hong Kong Polytechnic University, Aug. 25, 2009
23. 2009 The Digital Marauder's Map, Department of Computer Science Seminar, Southeast University, China, Aug. 18, 2009
24. 2009 One Cell is Enough to Break Tor's Anonymity, Department of Computer Science System and Networking Group (SANG) Research Seminar, George Mason University, Feb. 20, 2009
25. 2006 Camouflaging Virtual Honeypots, Department of Computer Science Seminar, North Dakota State University, ND, Apr. 7, 2006

D. INSTRUCTION RELATED ACTIVITIES

1. Teaching

a. Courses Taught at University of Massachusetts Lowell

Semester	Number	Course Title	ENRL	Level
Spring 2020	COMP.4611	COMP.4611 Cyber Crime Investigation	9	UGRD
Fall 2019	COMP.6610	Advanced Topics in Network Security	4	GRAD

b. Courses Taught at University of Central Florida

Semester	Number	Course Title	ENRL	Level
Spring 2019	CAP 4145	Introduction to malware analysis Security	53	UGRD

Fall 2018	CAP 6133	Advanced Topics in Computer Security and Computer Forensics	36	GRAD
Spring 2018	CAP 4145	Introduction to malware analysis	20	UGRD
Fall 2017	CAP 6133	Advanced Topics in Computer Security and Computer Forensics	39	GRAD

c. Courses Taught at University of Massachusetts Lowell

Semester	Number	Course Title	ENRL	Level
Fall 2016	COMP.6610	Advanced Topics in Network Security	34	GRAD
Summer 2016	MSIT.5620	Digital Forensics (ContinuingEd)	25	GRAD
Spring 2016	COMP.4600	Introduction to computer Security	39	UGRD
	COMP.5300	IoT Security and Privacy	50	GRAD
	MSIT.5620	Digital Forensics (ContinuingEd)	15	GRAD
Fall 2015	COMP.4600	Selected Topics: Cyber Crime Investigation	19	UGRD
	COMP.5300	Selected Topics: Cyber Crime Investigation	21	GRAD
	MSIT.5620	Digital Forensics (ContinuingEd)	34	GRAD
Spring 2015	Sabbatical leave			
Fall 2014	94.562	Digital Forensics (ContinuingEd)	21	GRAD
	Parental and family leave			
Spring 2014	91.661	Advanced Topics in Network Security	13	GRAD
	91.204	Computing IV	50	UGRD
	94.562	Digital Forensics (ContinuingEd)	29	GRAD
	91.562	Digital Forensics (ContinuingEd)	14	GRAD
Fall 2013	91.203	Assembly Language Programming	43	UGRD
	94.530	Digital Forensics (ContinuingEd)	26	GRAD
Spring 2013	91.661	Advanced Topics in Network Security	13	GRAD
	91.204	Computing IV	50	UGRD
	94.562	Digital Forensics (ContinuingEd)	25	GRAD
Fall 2012	91.460	Special Topics: Advanced Topics in Network Security	7	UGRD
	94.530	Digital Forensics (ContinuingEd)	8	GRAD
Spring 2012	91.661	Advanced Topics in Network Security	11	GRAD
	94.562	Digital Forensics (ContinuingEd)	20	GRAD
Fall 2011	91.413	Data Communications I	13	GRAD
	91.204	Computing IV	23	UGRD
	94.562	Digital Forensics (ContinuingEd)	19	GRAD

Spring 2011	91.661	Advanced Topics in Network Security	7	GRAD
	91.204	Computing IV	35	UGRD
	94.562	Digital Forensics (ContinuingEd)	13	GRAD
Fall 2010	91.204	Computing IV	25	UGRD
Spring 2010	91.561	Computer & Network Security I	35	GRAD
Fall 2009	91.661	Advanced Topics in Network Security	9	GRAD
	91.204	Computing IV	17	UGRD
Spring 2009	91.561	Computer & Network Security I	19	GRAD
Fall 2008	91.580	Topics in Computer Science: Computer and Network Forensics	11	GRAD

d. Courses taught at Dakota State University

Semester	Number	Course Title	ENRL	Level
Spring 2008	INFA-721	Computer Forensics	N/A	GRAD
	CIS-418	Advanced Computer Forensics	N/A	UGRD
Fall 2007	INFA-719	Software Security	N/A	GRAD
	CSC-409	System and Security Programming	N/A	UGRD
Spring 2007	INFA-721	Computer Forensics	N/A	GRAD
	CIS-418	Intrusion Control/Detect	N/A	UGRD
Fall 2006	INFA-719	Software Security	N/A	GRAD
	CIS-414	Computer Security Fundamentals	N/A	UGRD
Spring 2006	CIS-418	Intrusion Control/Detect	N/A	UGRD
	CIS-492	Topics: Computer Forensics	N/A	UGRD
Fall 2005	INFA-719	Software Security	N/A	GRAD
	CIS-414	Computer Security Fundamentals	N/A	UGRD
	CIS-414	Computer Security Fundamentals	N/A	UGRD

2. Other Activities and Accomplishments Related to the Instructional Function

a. Graduate Dissertation/Thesis Advisor

2015 – present	Chao Gao	Ph.D. in progress	Expected to graduate in 2021
2013 – 2019	Zupei Li	Ph.D. in progress	March 18, 2019
2013 – 2018	Joshua Kraunelis	Ph.D, in progress	Defense on August 15th, 2018
2012 – 2017	Qinggang Yue	Ph.D, in progress	Defense on April 24, 2017
2015-2016	Md Gayas Chowdhury	M.S. Thesis: Secure Web System for Classifying Cyber Crimes and Investigation	Defense on Apr. 20, 2016

2009-2014	Zhongli Liu	Ph.D Dissertation: Localization of Wireless Targets: Theory and Implementation	Defense on February 20 2014 Software Engineer at TeraRecon, Inc.
2009-2013	Yinjie Chen	Ph.D Dissertation: Sampling Theory for Wireless Localization	Defense on December 18th, 2013 Software Engineer at Google Inc.
2012-2013	Hui Li	M.S. Thesis: Network Forensics Education Project and Survey Evaluation	Defense on April 23, 2013 Software Engineer at HB Software Solutions
2009-2013	Junwei Huang	Ph.D Dissertation: A Comprehensive Study of Network Forensics in terms of Laws and Technologies	Defense on May 7, 2013 Software Engineer at HERE, a Nokia business
2009-2013	Xian Pan	Ph.D Dissertation: Privacy Leaking and Enhancing for Modern Wireless Mouse	Defense on December 13, 2013 Software Engineer at Yahoo! Inc.

b. Thesis Committee Member

2014	Bhanu Kaushik	Ph.D. Dissertation: Collaborative Data Sharing and Service Assurance in Mobile Opportunistic Networks	Committee Chair: Benyuan Liu Defense on April 7, 2014
2014	Chunhui Zhang	Ph.D Dissertation: MVPTrack: An Energy Efficient Continuous Place and Motion State Tracking Framework	Committee Chair: Guanling Chen Note: Defense on August 28th, 2014
2011	Tefen (Derfen) Lin	Ph.D Dissertation: Creating A New Design Of Fwb-Fsd Error Diffusion Systems For Mosaic Imagery	Committee Chair: Jie Wang Defense on November 29, 2011
2011	Aniket S. Pingley	Ph.D Dissertation: Client-centric Privacy Protection for Location- based Services	Committee Chair: Nan Zhang, George Washington University

2011	Jonathan Labroad	M.S. Dissertation: Performance analysis of reconfigurable logic accelerators in heterogeneous multi-core architectures	Committee Chair: Yan Luo
2011	Williams Gauvin	Ph.D Dissertation: Protecting the privacy of on-line social network Users	Committee Chair: Benyuan Liu
2010	Anwar Saipulla	Ph.D Dissertation: Barrier Coverage of Wireless Sensor Networks	Committee Chair: Benyuan Liu
2009	Qiang Hou	M.S Dissertation: A study on Wireless Mesh Network Security	Committee Chair: Jie Wang

E. SERVICE ACTIVITIES

1. Service to the Department

- 2016-2017 Coordinator of Department Colloquium
- 2015-2016 Faculty Search Committee
- 2013-2014 Instructor Search Committee
- 2012-2013 Associate Chair, Department of Computer Science, UMass Lowell
- 2011-2012 Coordinator of Department Colloquium
- 2011-2014 Member of Graduate Committee
- 2010-2012 Seminar chair for Center of Network and Information Security (CNIS)
- 2008-2011 Member of Undergraduate Committee

2. Service to the College and University

- 2016 Interview of candidates for Associate Vice Chancellor for Research Administration & Institution Compliance
- 2015-2016 University Senator Committee
- 2015-Present Point of Contact, UMass Lowell National Centers of Academic Excellence in Cyber Defense Research (CAE-R), designated by NSA and DHS
- 2013-Present Co-Director, Center for Internet Security and Forensics Education and Research (iSAFER)
- 2013-2014 University Senator Committee
- 2012-2013 University Senator Committee
- 2011 Spring University Senator Committee
- 2010-2013 Director, Center for Cyber Forensics at UMass Lowell, founded in Fall 2010
- 2009-2015 Demonstration in Open House, College of Arts and Sciences

