Dianxiang Xu

Division of Computing, Analytics and Mathematics
School of Science and Engineering
University of Missouri-Kansas City
Kansas City, MO 64110
816-235-6218
dxu@umkc.edu

EDUCATION

Ph.D., M.S., B.S., Computer Science, Nanjing University, China

RESEARCH INTERESTS

Software security, access control, software engineering, data analytics, intelligent agents, computer forensics

TEACHING INTERESTS

Software engineering, advanced software engineering, software testing and verification, secure software engineering, secure programming, computer and information security, computer forensics, artificial intelligence, programming languages

EMPLOYMENT

- August 2022 – present: Professor and Director, Division of Computing, Analytics and Mathematics, University of Missouri – Kansas City
- September 2019 – July 2022: Professor and Associate chair (September 2021– July 2022), Department of Computer Science Electrical Engineering, University of Missouri – Kansas City
- August 2013 – August 2019: Professor, Department of Computer Science, Boise State University
- May 2009 – August 2013. Associate professor, National Center for the Protection of the Financial Infrastructure, College of Business and Information Systems, Dakota State University
- July 2003 – May 2009. Assistant professor, Department of Computer Science, North Dakota State University
- August 2000 – July 2003. Research assistant professor/engineer, Department of Computer Science, Texas A&M University
- May 1999 – August 2000. Research associate, School of Computer Science, Florida International University
- July 1998 – May 1999. Associate chair, Department of Computer Science and Technology, Nanjing University
- March 1998 – November 2000. Associate professor, Department of Computer Science and Technology, Nanjing University (On leave from May 1999 to November 2000)
- July 1995 – February 1998. Assistant professor, Department of Computer Science and Technology, Nanjing University

GRANTS AND CONTRACTS

1. "GenCyber Summer Camps for Underrepresented High School Students in the Kansas City Metropolitan Area", NSA, $149,836, August 2022 – July 2024, Dianxiang Xu (PI), Yugyung Lee, Farid Nait-Abdesselam.

2. "Interdisciplinary Graduate Training through Research in Artificial Intelligence and Secure Networked Sensing to Mitigate the Crisis of Alcohol and Drug Abuse", NSF 2152057, $2,999,999, July 2022 – June 2027, Farid Nait-Abdesselam (PI), Yugyung Lee, Dianxiang Xu, Masud Chowdhury, Mostafizur Rahman.

3. "GenCyber Summer Camps for Underrepresented High School Students in the Kansas City Metropolitan Area", NSA, $143,461, August 2021 – July 2023, Dianxiang Xu (PI), Yugyung Lee, Farid Nait-Abdesselam.

4. "EAGER: SaTC-EDU: Exploring Visualized and Explainable AI to Improve Students' Learning Experience in Digital Forensics Education at MSI and HBCU", NSF 2039288, $105,600, April 2021 – March 2023, Dianxiang Xu (PI).

5. "GenCyber Summer Camps for Underrepresented High School Students in the Kansas City Metropolitan Area", NSA, $96,058, April 2021 – March 2022, Dianxiang Xu (PI), Yugyung Lee, Farid Nait-Abdesselam.

6. "Capacity Building: Integrating Data Science into Cybersecurity Curriculum", NSF 1820685, $499,964, September 2018 – August 2022, Edoardo Serra (PI), Francesca Spezzano, and Dianxiang Xu. Transferred a subaward $124,000 to UMKC.

7. "TWC: Small: Benchmarking Testing Methods for Access Control Policies", NSF CNS 1954327, $285,157, September 2019-August 2022, Dianxiang Xu (PI). Transferred from NSF CNS 1618229, $497,121 (total), September 2016 – August 2019.

8. "IUSE/PFE:RED: Computer Science Professionals Hatchery: An Ecosystem for Nurturing the Next Generation of Computer Science Professionals", NSF EEC 1623189, $2,000,000, July 2016 – June 2022, Amit Jain (PI), Dianxiang Xu, Timothy Andersen, Noah Salzman, Donald Winiecki.

9. "Gencyber Summer Camps for Underrepresented Idaho High School Students", NSA, $99,990, March 2018-Februray 2019, Gaby Dagher (PI), Jidong Xiao, Dianxiang Xu.

10. "EDU: Developing a Software Artifact Repository for Software Assurance Education", NSF DGE 1522847, $300,000, September 2015 – August 2018, Dianxiang Xu (PI).

11. "Summer Research Experience for High School Students in Cybersecurity", NASA Idaho Space Grant Consortium, $50,038, June 2017 – May 2018, Jyh-haw Yeh (PI), Dianxiang Xu.

12. "REU Site: Software Security", NSF CNS 1461133, $344,000 (including $20,000 RET supplement), March 2015 – February 2018, Dianxiang Xu (PI) and Jyh-haw Yeh.

13. "TTP: Small: Automated Conformance Testing of Access Control and Obligation Policies", NSF CNS 1359590, $515,371 (including $15,600 REU supplement), September 2013 – August 2017. Dianxiang Xu (PI).

14. "RET Site: Cyber Security", NSF CNS 1200648, $500,000, May 2012 – April 2015, Dianxiang Xu (PI) and Pat Engebretson. (PI transfer in September 2013)

15. "MRI: Acquisition of an Online Banking System for Information Assurance Research", NSF CNS 1123220, $400,000, September 2011 – August 2014. Dianxiang Xu (PI), Joshua Pauli, Manghui Tu. (PI transfer and subaward $145,000 to BSU in September 2013)

16. "Model-Based Test Automation Technique and Tool", Samsung Electronics (Korea), $60,000. July 2011 – December 2011, Dianxiang Xu (PI).

17. "Dakota Defenders Information Assurance Scholarship Program", NSF DUE 1026114, $1,305,565. March 2011 – February 2015, Josh Pauli (PI), Tom Halverson, Dianxiang Xu, Pat Engebretson, Kevin Streff

18. "Automated Test Generation for Embedded Concurrent Software", Samsung Electronics (Korea), $40,000. October 2010 – February 2011, Dianxiang Xu (PI).

19. "REU Site: Information Assurance and Security", NSF CNS 1004843, $328,427, May 2010 – April 2013, Dianxiang Xu (PI) and Josh Pauli.

20. "II-NEW: Infrastructure for Model-Based Security Testing, Controlled Experiments, and Education", NSF CNS 0855106, $220,000, September 2009 – August 2012, Hyunsook Do (PI, NDSU, $120,000) and Dianxiang Xu (DSU, $100,000).

21. "A Multi-User Virtual Biology Environment for Discovery-Oriented Science Education", NIH SBIR Phase I, $100,000, April 2008 – March 2009, Bradley Vender (PI) and Brian Slator (WoWiWe Instruction Co.), Phillip McClean and Dianxiang Xu (NDSU). Phase II was awarded in 2011.
22. "Testing for Software Safety", NASA OSMA/SARP Center Initiatives, $136,000, January 2007 – December 2007, Ken Chen (PI, Johnson Space Center), W. Eric Wong (University of Texas at Dallas), Yann-Hang Lee (Arizona State University), Dianxiang Xu (NDSU).
23. "Automated Generation of Safety Tests", ND NASA EPSCoR through NASA grant #NNXO7AK91A, $18,729, November 2007 – August 2008, Dianxiang Xu (PI)
24. "Model-Checking Aspect-Oriented Design Specifications", ND EPSCoR IIP-SG through NSF Grant EPS-047679, $15,000, October 2006 – April 2007. Dianxiang Xu (PI).
25. "Model-Based Testing of Aspect-Oriented Software", ND NASA EPSCoR through NASA Grant NCC5-582. $13,750. April 2006– July 2006. Dianxiang Xu (PI).
26. "Internet-Based Software Agents and Their Applications in Electronic Commerce". National Hi-Tech Research & Development (a.k.a. 863) Plan of China. RMB Yuan 300,000. November 1998 – December 2000. Dianxiang Xu (PI).
27. "Concurrent Behaviors and Non-monotonic Inheritance of Intelligent Agents". Natural Science Foundation of China. RMB Yuan 100,000. January 1997 – December 1999. Dianxiang Xu (PI).
28. "Software Agents on Information Networks". National Hi-Tech Research & Development (a.k.a. 863) Plan of China. RMB Yuan 100,000. June 1996 – June 1998. Dianxiang Xu (PI).

INTERNAL GRANTS

29. "Predicting Software Vulnerabilities via Deep Learning", UMKC dSAIC Pilot Project, $73,000, 2021-2022. Dianxiang Xu (PI)
30. "Model-based Testing of Obligation Policies", DSU Seed Grant, $9,911, June 2012 - August 2012. Dianxiang Xu (PI).

SELECTED PUBLICATIONS

Books

1. Dianxiang Xu, *Modern Software Engineering: Principles and Practices – Writing Clean, Dependable Code*. Independently Published, January 2021. ISBN-13: 979-8596959666.

Journal Articles

2. Yu Luo, Weifeng Xu, and Dianxiang Xu. Predicting Integer Overflow Errors via Supervised Learning, *International Journal on Artificial Intelligence Tools*. Vol. 31, No. 08, 2250047 (2022).
3. Zhiyuan Li, Weijia Xing, Samer Khamaiseh, and Dianxiang Xu, Detecting Saturation Attacks Based on Self-Similarity of OpenFlow Traffic, *IEEE Transactions on Network and Service Management*, Vol. 17, No. 1, March 2020, pp. 607 - 621.
4. Yan Wu, Anthony Luo, Dianxiang Xu, Identifying Suspicious Addresses in Bitcoin Thefts, *Forensic Science International: Digital Investigation*, Volume 31, December 2019.
5. Dazhi Yang, Dianxiang Xu, Jyh-haw Yeh, Yibo Fan. Undergraduate Research Experience in Cybersecurity for Underrepresented Students and Students with Limited Research Opportunities. *Journal of STEM Education*. Vol. 19, No. 5, Feb. 2019.
6. Manghui Tu, Liangliang Xiao, Dianxiang Xu. Enhancing Availability for Distributed Replicated Services Considering Network Edge Availability. *International Journal of Computer Networks & Communications (IJCNC)*, Vol.11, No.1, January 2019.

7. Izzat Alsmadi, Abdallah Khreishah, Dianxiang Xu. Network Slicing to Improve Multicasting in HPC Clusters. *Cluster Computing*, Vol. 21, No. 3, pp.1493-1506, 2018, Springer.

8. Weifeng Xu, Dianxiang Xu, Abdulrahman Alatawi, Omar El Ariss, and Yunkai Liu. Statistical Unigram Analysis for Source Code Repository. *International Journal of Semantic Computing*, Vol. 12, No. 2, pp. 237-260, 2018.

9. Dianxiang Xu, Weifeng Xu, Manghui Tu, Ning Shen, William Chu, Chih-Hung Chang. Automated Integration Testing Using Logical Contracts, *IEEE Transactions on Reliability*, Vol. 65, No. 3, pp.1205-1222, Sept. 2016.

10. Sandeep Lakkaraju, Dianxiang Xu, Yong Wang. Analysis of Healthcare Workflows in Accordance with Access Control Policies, *International Journal of Healthcare Information Systems and Informatics (IJHISI)*, vol. 11, no. 1, pp.1-20, 2016.

11. Dianxiang Xu, Ning Shen, Yunpeng Zhang. Detecting Incorrect Uses of Combining Algorithms in XACML 3.0 Policies, *International Journal of Software Engineering and Knowledge Engineering*, Vol. 25, Nos. 9 & 10 (2015) 1551–1571. Expanded version of the SEKE'15 paper.

12. Izzat Alsmadi and Dianxiang Xu, Security of Software Defined Networks: A Survey, *Computers and Security*. 53 (2015): 79-108.

13. Dianxiang Xu, Michael Kent, Lijo Thomas, Tejeddine Mouelhi, and Yves Le Traon. Automated Model-Based Testing of Role-Based Access Control Using Predicate/Transition Nets. *IEEE Transactions on Computers*, Vo. 64, No. 9, pp. 2490-2505, September 2015.

14. Dianxiang Xu, Weifeng Xu, Michael Kent, Lijo Thomas, Linzhang Wang. An Automated Test Generation Technique for Software Quality Assurance, *IEEE Transactions on Reliability*, Vol. 64, No. 1, pp. 247-268, March 2015.

15. Manghui Tu, Hui Ma, Liangliang Xiao, I-Ling Yen, Farokh Bastani, Dianxiang Xu. Data Placement in P2P Data Grids Considering the Availability, Security, Access Performance and Load Balancing. *Journal of Grid Computing*, 11(1): 103-127 (2013).

16. Manghui Tu and Dianxiang Xu. Resilience as a New System Engineering for Cloud Systems. *Journal of Communications*. Vol. 8, No. 4, pp. 267-274, 2013.

17. Aaron Marback, Hyunsook Do, Ke He, Samuel Kondamarri, Dianxiang Xu, A Threat Model-based Approach to Security Testing, *Software: Practice and Experience*, Vol. 43, No.2, pp. 241-258, Feb. 2013.

18. Manghui Tu, Dianxiang Xu, Eugene Butler, and Amanda Schwartz. Forensic Evidence Identification and Modeling for Attacks against a Simulated Online Business Information System. *Journal of Digital Forensics, Security, and Law*. Vol. 7, No. 4, 2012.

19. Dianxiang Xu, Manghui Tu, Michael Sanford, Lijo Thomas, Daniel Woodraska, and Weifeng Xu, Automated Security Test Generation with Formal Threat Models, *IEEE Transactions on Dependable and Secure Computing*, Vol. 9, No.4, July/August 2012, pp. 525-539.

20. Omar El Ariss, Dianxiang Xu. Secure System Modeling: Integrating Security Attacks with Statecharts. *International Journal of Software and Informatics*, Special issue on Software Modeling and Meta-Modeling. 6(2): 271-306, 2012.

21. W. Eric Wong, Vidroha Debroy, Dianxiang Xu. Towards Better Fault Localization: A Crosstab-based Statistical Approach, *IEEE Transactions on Systems, Man, and Cybernetics--Part C: Applications and Reviews*. Vol. 42, no. 3, pp. 378-396, 2012.

22. Dianxiang Xu, Omar El Ariss, Weifeng Xu, Linzhang Wang. Testing Aspect-Oriented Programs with Finite State Machines, *Journal of Software Testing, Verification and Reliability*, 22: 267-293, 2012.

23. Omar El Ariss, Dianxiang Xu, and W. Eric Wong. Integrating Safety Analysis with Functional Modeling, *IEEE Transactions on Systems, Man, and Cybernetics--Part A: Systems and Humans*, Vol. 41, No. 4, pp. 610-624, July 2011.

24. Jun Kong, Dianxiang Xu, and Xiaoqin Zeng. UML-based Modeling and Analysis of Security Threats. *International Journal of Software Engineering and Knowledge Engineering*, 20(6): 875-897, Sept. 2010.

25. Dianxiang Xu, Omar El Ariss, Weifeng Xu, Linzhang Wang, Aspect-Oriented Modeling and Verification with Finite State Machines, *Journal of Computer Science and Technology*, 24(5): 949-961, Sept. 2009.

26. Dianxiang Xu, Weifeng Xu and W. Eric Wong, Automated Test Code Generation from Class State Models, *International Journal of Software Engineering and Knowledge Engineering*, 19(4): 599-623, June 2009.

27. Jun Kong, Kang Zhang, Jing Dong, and Dianxiang Xu, Specifying Behavioral Semantics of UML Diagrams Through Graph Transformations, *Journal of Systems and Software*, 82(2): 292-306 (2009).

28. Dianxiang Xu, Weifeng Xu, and W. Eric Wong, Testing Aspect-Oriented Programs with UML Design Models, *International Journal of Software Engineering and Knowledge Engineering*, Vol. 18, No. 3, pp. 413-437, May 2008.

29. Dianxiang Xu, Vivek Goel, Kendall Nygard, and W. Eric Wong. Aspect-Oriented Specification of Threat-Driven Security Requirements, *International Journal of Computer Applications in Technology*, *Special Issue on Concern Oriented Software Evolution*, Vol. 31, Nos. 1/2, pp. 131-140, 2008.

30. Martin C. Lundell, Dianxiang Xu, Denver Tolliver, and Kendall E. Nygard. A Multi-Agent Design for Sense and Respond Logistics Simulation, *World Review of Intermodal Transportation Research*, Vol. 1, No. 4, pp. 459-471, 2007.

31. Junhua Ding, Dianxiang Xu, Yi Deng, Peter J. Clarke, Xudong He. A Formal Model-Based Approach for Developing an Interoperable Mobile Agent System. *Multi-Agent and Grid Systems: An International Journal. Special issue on Agent-oriented Software Development Methodologies*. Volume 2, Number 4, pp. 401-412, 2006.

32. Dianxiang Xu and Josh Pauli. Threat-Driven Design and Analysis of Secure Software Architectures. *Journal of Information Assurance and Security*, Vol.1, No.3, pp. 171-180, 2006.

33. Dianxiang Xu and Kendall E. Nygard. Threat-Driven Modeling and Verification of Secure Software Using Aspect-Oriented Petri Nets. *IEEE Transactions on Software Engineering*. Vol. 32, No. 4, pp. 265-278, April 2006.

34. Dianxiang Xu, Richard A. Volz, Michael S. Miller, and Jesse Plymale. Knowledge-Based Human-Agent Teamwork for Distributed Training. *International Journal of Intelligent Control and Systems*. Vol. 11, No. 1, pp. 1-10, March 2006.

35. Junhua Ding, Dianxiang Xu, Xudong He, and Yi Deng. Modeling and Analyzing a Mobile Agent-based Clinical Information System. *International Journal of Intelligent Control and Systems*. Vol. 10, No. 2, pp. 143-151, June 2005.

36. Sen Cao, Richard. A. Volz, Jamison Johnson, Maitreyi Nanjanath, Jonathan Whetzel, and Dianxiang Xu, Development of a Distributed Multi-Player Computer Game for Scientific Experiment of Team-Training Protocols, *The Electronic Library – The Int. J. for the Applications of Technology in Information Environments*, Vol. 22 No. 1, pp. 43-54, 2004.

37. Dianxiang Xu, Richard A. Volz, Thomas R. Ioerger, and John Yen, Modeling and Analyzing Multi-Agent Behaviors Using Predicate/Transition Nets, *International Journal of Software Engineering and Knowledge Engineering*, Vol. 13, No. 1, pp.103-124, February 2003.

38. Dianxiang Xu, Jianwen Yin, Yi Deng, and Junhua Ding, A Formal Architectural Model for Logical Agent Mobility, *IEEE Transactions on Software Engineering*, Vol.29, No.1, pp. 31-45, 2003.

39. Dianxiang Xu, Xudong He, and Yi Deng, Compositional Schedulability Analysis of Real Time Systems Using Time Petri Nets, *IEEE Transactions on Software Engineering*, vol.28, no.10, pp. 984-996, October 2002.

40. Xiaocong Fan, Dianxiang Xu, Jianmin Hou, and Guoliang Zheng, Reasoning about Concurrent Actions in Multi-Agent Systems, *Journal of Computer Science and Technology*, vol.14, no.4, pp. 422-428, July 1999.

41. Dianxiang Xu, Guoliang Zheng, and Xiaocong Fan, A Logic Based Language for Networked Agents, *Information and Software Technology*, vol.40, no.8, pp. 435-442, August 1998.

42. Dianxiang Xu, Towards an Object-Oriented Logic Framework for Knowledge Based Systems, *Knowledge Based Systems*, vol.10, no.6, pp. 351-358, April 1998.

43. Dianxiang Xu and Guoliang Zheng, Towards a Declarative Semantics of Inheritance with Exceptions, *Journal of Computer Science and Technology*, Vol.11, No.1, pp. 61-71, 1996.

44. Jingui Pan, Shifu Chen, Dianxiang Xu, and Zhaoqian Chen, A Framework for Intelligent Decision Support System, *Chinese Journal of Advanced Software Research (In English)*, vol.2, no.1, pp. 21-27, March 1995.

45. Dianxiang Xu, Jingui Pan, Shifu Chen, and Zhaoqian Chen, A Knowledge Based Model Description Language, *Chinese Journal of Advanced Software Research (In English)*, vol.1, no.4, pp. 391-396, December 1994.

Conference/Workshop Papers

46. Yu Luo, Weifeng Xu and Dianxiang Xu, Compact Abstract Graphs for Detecting Code Vulnerability with GNN Models, *Proc. of the Annual Computer Security Applications Conference (ACSAC'22)*, pp. 497-507, December 2022.

47. Weifeng Xu and Dianxiang Xu. Visualizing and Reasoning about Presentable Digital Forensic Evidence with Knowledge Graphs. *Proc. of the 19th IEEE Conference on Privacy, Security and Trust (PST'22)*, pp. 1-10, Fredericton, Canada, August 2022.

48. Weifeng Xu, Lin Deng and Dianxiang Xu. Towards Designing Shared Digital Forensics Instructional Materials. *Proc. of the IEEE 46th Annual Computers, Software, and Applications Conference (COMPSAC'22)*, pp. 117-122, July 2022.

49. Dianxiang Xu, Roshan Shrestha, Yunpeng Zhang, and Ning Shen. Towards a Theory on Testing XACML Policies, *Proc. of the 27th ACM Symposium on Access Control Models and Technologies (SACMAT'22)*, pp. 103-114, June 2022. https://doi.org/10.1145/3532105.3535031

50. Yu Luo, Weifeng Xu, and Dianxiang Xu, Detecting Integer Overflow Errors in Java Source Code via Machine Learning, *Proc. of the 33rd IEEE International Conference on Tools with Artificial Intelligence (ICTAI'2021)*, pp. 724-728, November 2021.

51. Anthony Luo and Dianxiang Xu, Quantifying Event Impact on the Bitcoin Blockchain, *Proc. of the 2021 IEEE Computers, Software, and Applications Conference (COMPSAC'21)*, pp. 268-273, July 2021.

52. Erzhuo Chen, Vladislav Dubrovenski, Dianxiang Xu. Mutation Analysis of NGAC Policies. *Proc. of the 26h ACM Symposium on Access Control Models and Technologies (SACMAT'21)*, pp.71-82, June 2021.

53. Samer Khamaiseh, Edoardo Serra, and Dianxiang Xu, vSwitchGuard: Defending OpenFlow Switches against Saturation Attacks. *Proc. of the 2020 IEEE Computers, Software, and Applications Conference (COMPSAC'2020)*, pp. 851-860.

54. Dianxiang Xu, Roshan Shrestha, Ning Shen. Automated Strong Mutation Testing of XACML Policies, *Proc. of the 25th ACM Symposium on Access Control Models and Technologies (SACMAT'20)*, pp. 105-116, June 2020.

55. Abdulrahman Alatawi, Weifeng Xu and Dianxiang Xu. A Bigram-based Inference Model for Retrieving Abbreviated Phrases in Source Code. *Proc. of the International Conference on Evaluation and Assessment in Software Engineering (EASE)*. pp. 11-20. April 2020.

56. Samer Khamaiseh, Edoardo Serra, Zhiyuan Li, Dianxiang Xu, Detecting Saturation Attacks in SDN via Machine Learning, *Proc. of the 4th IEEE International Conference on Computing, Communications and Security (ICCCS 2019)*, pp.1-8, Rome, Italy, October 2019. **Runner Up for the Best Paper Award.**

57. Patrick Chapman, Dianxiang Xu, Lin Deng, and Yin Xiong. Deviant: A Mutation Testing Tool for Solidity Smart Contracts, *Proc. of the 2nd IEEE International Conference on Blockchain (Blockchain-2019)*, pp. 319-324, Atlanta, USA, July 2019.

58. Yan Wu, Anthony Luo, Dianxiang Xu, Forensic Analysis of Bitcoin Transactions*, Proc. of the 2019 IEEE Conference on Intelligence and Security Informatics (ISI'19)*, Shenzhen, China, July 2019.

59. Zhiyuan Li, Weijia Xing and Dianxiang Xu, Detecting Saturation Attacks in Software-Defined Networks, *Proc. of the 2018 IEEE Conference on Intelligence and Security Informatics (ISI'18)*, pp. 163-168, Miami, Florida, November 2018.

60. Dianxiang Xu, Roshan Shrestha, Ning Shen. Automated Coverage-Based Testing of XACML Policies, *Proc. of the 23rd ACM Symposium on Access Control Models and Technologies (SACMAT'18)*, pp. 3-14, Indianapolis, USA, June 2018. **Best Paper Award.**

61. Samer Khamaiseh, Patrick Chapman, Dianxiang Xu. Model-Based Testing of Obligatory ABAC Systems, *Proc. of the 18th International Conference on Software Quality, Reliability and Security (QRS'18)*, pp. 405-413, Lisbon, Portugal. July 2018.

62. Roshan Shrestha, Shuai Peng, Turner Lehmbecker, Dianxiang Xu, XPA: An Open-Source IDE for XACML Policies, *Proc. of the 30th International Conference on Software Engineering and Knowledge Engineering (SEKE'18)*, San Francisco Bay, July 2018.

63. Yan Wu, Nitish Dhakal, Dianxiang Xu, Jin-Hee Cho. Analysis and Prediction of Endorsement-based Skill Assessment in LinkedIn. *Proc. of the 42nd IEEE Computer Software and Applications Conference (COMPSAC'18)*, pp. 461-470, Tokyo, Japan, July 2018.

64. Donald Winiecki, Noah Salzman, Timothy Andersen, Amit Jain, Dianxiang Xu, Infusing Inclusion, Diversity, and Social Justice into the Undergraduate Computer Science Curriculum at Boise State University. *2018 CoNECD - The Collaborative Network for Engineering and Computing Diversity Conference*, Crystal City, Virginia. April 2018.

65. Abdulrahman Alatawi, Weifeng Xu, Dianxiang Xu. Bayesian Unigram-Based Inference for Expanding Abbreviations in Source Code. *Proc. of the 29th IEEE International Conference on Tools with Artificial Intelligence (ICTAI'17)*, pp. 543-550, Boston, MA, November 2017.

66. Samer Khamaiseh and Dianxiang Xu, Software Security Testing via Misuse Case Modeling, *Proc. of the 15th IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC'17)*, Orlando, Florida, November 2017.

67. Nitish Dhakal, Francesca Spezzano, Dianxiang Xu. Predicting Friendship Strength for Privacy Preserving: A Case Study on Facebook. *International Symposium on Foundations of Open Source Intelligence and Security Informatics (FOSINT-SI'17)*, in conjunction with IEEE/ACM International Conference on Social Networks Analysis and Mining (ASONAM 2017), Sydney, Australia, 2017.

68. Weifeng Xu, Dianxiang Xu, Lin Deng. Measurement of Source Code Readability Using Word Concreteness and Memory Retention of Variable Names. *Proc. of the 41st IEEE Computer Software and Applications Conference (COMPSAC'17)*, pp. 33-38, Torino, Italy, July 2017.

69. Weifeng Xu, Dianxiang Xu, Omar El Ariss, Yunkai Liu, Abdulrahman Alatawi. Ultra-Large-Scale Analysis of Unigrams Collected from Source Code Repository. *Proc. of the Third IEEE International Conference on Multimedia Big Data (BigMM'2017)*, pp. 1-8, Laguna Hills, California, USA, April 2017.

70. Izzat Alsmadi, Samer Khamaiseh, Dianxiang Xu. Network Parallelization in HPC Clusters. *The 2016 International Conference on Computational Science and Computational Intelligence (CSCI'16), Symposium of Parallel and Distributed Computing and Computational Science CSCI-ISPD)*, pp. 584-589. December 15-17, 2016, Las Vegas, USA.

71. Dianxiang Xu and Shuai Peng. Towards Automatic Repair of Access Control Policies. *Proc. of the 14th IEEE Conference on Privacy, Security and Trust (PST'16)*, pp. 485-492, Auckland, New Zealand, December 2016.

72. Jin-Hee Cho, Izzat Alsmadi, Dianxiang Xu. Privacy and Social Capital in Online Social Networks, *IEEE GLOBECOM'16*, pp. 1-7, Washington, DC, USA, December 2016.

73. Sung-Ju Fan Chiang, Daniel Chen and Dianxiang Xu. Conformance Testing of Balana: An Open Source Implementation of the XACML3.0 Standard. *Proc. of the 28th International Conference on Software Engineering and Knowledge Engineering (SEKE'16)*, San Francisco Bay, July 2016.

74. Dianxiang Xu, Zhenyu Wang, Shuai Peng, Ning Shen. Automated Fault Localization of XACML Policies, *Proc. of the 21st ACM Symposium on Access Control Models and Technologies (SACMAT'16)*, pp. 137-147, Shanghai, China, June 2016.

75. Izzat Alsmadi, Dianxiang Xu and Jin-Hee Cho. Interaction-Based Reputation Model in Online Social Networks, *Proc. of the 2nd International Conference on Information Systems Security and Privacy (ICISSP'16)*, pp. 265-272, Short paper. Feb. 2016, Rome, Italy.

76. Dianxiang Xu, Yunpeng Zhang, Ning Shen. Formalizing Semantic Differences between Combining Algorithms in XACML 3.0 Policies, *Proc. of the 2015 International Conference on Software Quality, Reliability and Security (QRS'15)*, pp. 163-172. Vancouver, Canada. August 2015. **Honorable Recognition of Paper**.

77. Dianxiang Xu, Ning Shen, Yunpeng Zhang. Fault-Based Testing of Combining Algorithms in XACML3.0 Policies. *Proc. of the 27th International Conf. on Software Engineering and Knowledge Engineering (SEKE'15)*, Pittsburg, July 2015.

78. Izzat Alsmadi, Milson Munakami, Dianxiang Xu. Model-Based Testing of SDN Firewalls: A Case Study, *Proc. of the second International Conference on Trustworthy Systems and Their Applications (TSA'15)*, pp. 81-88, Taiwan, July 2015.

79. Dianxiang Xu, Weifeng Xu, and Manghui Tu. Automated Generation of Integration Test Sequences from Logical Contracts, *Proc. of the 6th IEEE International Workshop on Software Test Automation (STA'14)*, in conjunction with COMPSAC 2014, Sweden, July 2014.

80. Dianxiang Xu, Ning Shen. Effectiveness of Automated Function Testing with Petri Nets: A Series of Controlled Experiments. *Proc. of the 26th International Conf. on Software Engineering and Knowledge Engineering (SEKE'14)*, Vancouver, July 2014.

81. Weifeng Xu, Tao Ding, Dianxiang Xu. Rule-based Test Input Generation from Bytecode, *Proc. of the 8th International Conference on Software Security and Reliability (SERE'14)*, pp. 108-117, San Francisco, CA. June 2014.

82. Dianxiang Xu, Yunpeng Zhang. Specification and Analysis of Attribute-Based Access Control Policies: An Overview. *Proc. of the International Workshop on Information Assurance*, in conjunction with SERE'14. pp. 41-49. San Francisco, CA. June 2014.

83. Sandeep Lakkaraju and Dianxiang Xu, Integrated Modeling and Analysis of Attribute based Access Control Policies and Workflows in Healthcare, *Proc. of the 1st International Conference on Trustworthy Systems and Their Applications (TSA'14)*, pp. 36-43, Taiwan, June 2014.

84. Weifeng Xu, Tao Ding, Hanling Wang, Dianxiang Xu, Mining Test Oracles for Test Inputs Generated from Java Bytecode, *Proc. of the 37th IEEE Computer Software and Applications Conference (COMPSAC'13)*, pp.27-32, Kyoto, Japan, July 2013.

85. Junhua Ding, Dianxiang Xu, Jidong Ge, An Approach for Analyzing Software Specifications in Petri Nets. *Proc. of the 25th International Conf. on Software Engineering and Knowledge Engineering (SEKE'13)*, June 2013.

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Book Chapters

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AWARDS AND HONORS

- Runner Up for the Best Paper Award. 4th IEEE International Conference on Computing, Communications and Security (ICCCS 2019).
- Best Paper Award, ACM Symposium on Access Control Models and Technologies (SACMAT'18)
- Honorable Recognition of Paper, International Conference on Software Quality, Reliability and Security (QRS'15)

- The second-class award for scientific and technological progress by the Education Ministry of China. 1998
- The third-class award for scientific and technological progress by the government of Jiangsu Province, China. 1996.
- The award for the remarkable achievements in science and technology invention and innovation by National Bureau in China, Technological Information Promotion System, United Nations. 1994
- The academic research award for outstanding young faculty by Nanjing University. 1996, 1997, 1998.

PROFESSIONAL ACTIVITIES AND SERVICES

Professional Societies

- Senior member, IEEE

Editor

- Co-Editor-in-Chief, International Journal of Performability Engineering (January-December 2016)
- Guest Editors of Journal Special Issues: International Journal of Software Engineering and Knowledge Engineering, Software Quality Journal, Advances in Software Engineering

Referee

- ACM TISSEC, IEEE TSE, IEEE TC, IEEE TDSC, IEEE TR, IEEE TKDE, IEEE TSC, IEEE TSMC-A, IEEE TSMC-C, Journal of Software Testing, Verification and Reliability, Journal of Systems and Software, Information and Software Technology, International Journal of Software Engineering and Knowledge Engineering, Software Quality Journal, Software and Systems Modeling, Software: Practice and Experience, Transactions on Aspect-Oriented Software Development, International Journal of Security and Networks

Conference/Workshop Program Committee

- 2022: QRS, program co-chair of the Workshop on Blockchain and Smart Contracts
- 2021: QRS (program co-chair of the Workshop on Blockchain and Smart Contracts), COMPSAC (co-chair of SEPT symposium)
- 2020: COMPSAC (co-chair of SEPT symposium), QRS
- 2019: COMPSAC (program co-chair of SEPT symposium), SEKE, QRS, AST
- 2018: COMPSAC (program co-chair of SEPT symposium), SEKE, QRS, AST
- 2017: COMPSAC (Steering Committee), QRS, SEKE, DSA, ICSOFT
- 2016: COMPSAC (program co-chair of SEPT symposium), SEKE, QRS
- 2015: COMPSAC (program co-chair of SEPT symposium), ACM SAC (SE track), SEKE, QRS, AST
- 2014: SACMAT, COMPSAC (Co-Chair of the Quality Assurance and Assessment track), ACM SAC (SE track), SEKE, SERE, AST
- 2013: SACMAT, COMPSAC (Co-Chair of the Formal Methods track), ACM SAC (SE track), SEKE, SERE, AST
- 2012: COMPSAC (Co-Chair of the Formal Methods track), AST (Program Co-chair), ACM SAC (SE track), SEKE, SERE
- 2011: COMPSAC, SSIRI, ACM SAC (SE track), AST
- 2010: COMPSAC, SSIRI (Program Co-Chair), GIC, ACM SAC (SE Track), AST
- 2009: COMPSAC, ACM SAC (SE Track), QSIC, SSIRI, AST
- 2008: COMPSAC, ACM SAC (SE and ME Tracks), QSIC, SSIRI, AST, TASE, MSVVEIS, ICNSC
- 2007: COMPSAC, SMC, ACM SAC SE Track, QSIC, WTAOP (Co-Chair), AST, MSVVEIS,