

Lingyu Wang

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RESEARCH INTERESTS

Security and Privacy. Specifically, data privacy, vulnerability analysis, intrusion detection, security metrics.

EDUCATION

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| 2000-2006 | Ph.D. in Information Technology
George Mason University, USA
Co-advisor: Dr. Sushil Jajodia and Dr. Duminda Wijesekera
Dissertation Topic: "Preserving privacy in on-line analytical processing (OLAP) data cubes" |
| 1993-1996 | M.E. in Material Engineering, Shanghai Jiao Tong University, China |
| 1989-1993 | B.E. in Aeronautical Engineering, Shenyang Institute of Aeronautical Engineering, China |

ACADEMIC EXPERIENCE

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| 2010-present | Associate Professor
Concordia Institute for Information Systems Engineering
Concordia University, Montreal, Canada |
| 2006-2010 | Assistant Professor
Concordia Institute for Information Systems Engineering
Concordia University, Montreal, Canada |
| 2000-2006 | Research Assistant
Center for Secure Information Systems (CSIS), George Mason University, Fairfax, USA |
| 1994-1996 | Research and Teaching Assistant
Shanghai Jiao Tong University, Shanghai, China |

PUBLICATIONS**Book and Book Chapters:**

1. Lingyu Wang, Sushil Jajodia, Anoop Singhal (Eds.), "Network Security Metrics," Springer, 2017, ISBN 978-3-319-66504-7, 206 pages.
2. Frédéric Cuppens, Lingyu Wang, Nora Cuppens-Boulahia, Nadia Tawbi, Joaquín García-Alfaro (Eds.): 9th International Symposium on Foundations and Practice of Security, FPS 2016, Québec City, QC, Canada, October 24-25, 2016, Lecture Notes in Computer Science 10128, Springer 2017, ISBN 978-3-319-51965-4.
3. Wen Ming Liu*, Lingyu Wang, "Preserving Privacy Against Side-Channel Leaks - From Data Publishing to Web Applications," Advances in Information Security 68, Springer 2016, ISBN 978-3-319-42642-6, 142 pages.
4. Wen Ming Liu*, Lingyu Wang, "Side Channel Attacks and Defenses on Cloud Traffic," in Cloud Computing Security: Foundations and Challenges, John R. Vacca, editor, CRC Press, 2016.
5. Djedjiga Mouheb*, Mourad Debbabi, Makan Pourzandi, Lingyu Wang, Mariam Nouh, Raha Ziarati*, Dima Alhadidi, Chamseddine Talhi, Vitor Lima*, "Aspect-Oriented Security Hardening of UML Design Models," Springer, 2015, ISBN 978-3-319-16105-1, 219 pages.
6. Lingyu Wang, Massimiliano Albanese, Sushil Jajodia: Network Hardening - An Automated Approach to Improving Network Security. Springer Briefs in Computer Science, Springer 2014, ISBN 978-3-319-04611-2, 60 pages.
7. Lingyu Wang, Basit Shafiq (Eds.): Data and Applications Security and Privacy XXVII - 27th Annual IFIP WG 11.3 Conference, DBSec 2013, Newark, NJ, USA, July 15-17, 2013. Proceedings. Lecture Notes in Computer Science 7964, Springer 2013, ISBN 978-3-642-39255-9.
8. Lingyu Wang, Sushil Jajodia, "An Approach to Preventing, Correlating, and Predicting Multi-Step Network Attacks," in Intrusion Detection Systems, Roberto Di Pietro, Luigi V. Mancini, editors, Springer, Berlin, 2008.
9. Lingyu Wang, Sushil Jajodia, "Security in Data Warehouses and OLAP Systems," in The Handbook of Database Security: Applications and Trends, Michael Gertz, Sushil Jajodia, editors, Springer, Berlin, 2007.
10. Lingyu Wang, Sushil Jajodia, "Vulnerability-Centric Alert Correlation," in Information Assurance: Survivability and Security in Networked Systems, David Tipper, Prashant Krishnamurthy, Yi Qian, James B. D. Joshi, editors, Morgan Kaufmann Publishers, 2007.
11. Lingyu Wang, Sushil Jajodia, Duminda Wijesekera, "Preserving Privacy in On-line Analytical Processing (OLAP)," ISBN:0-387-46273-2, Springer, Berlin, 2007, 190 Pages.
12. Lingyu Wang, Sushil Jajodia, Duminda Wijesekera, "Preserving Privacy in On-Line Analytical Processing Data Cubes," in Secure Data Management in Decentralized Systems, Ting Yu and Sushil Jajodia, editors, Springer, Berlin, 2007, pages 357-382.
13. Yves Deswarte, Frederic Cuppens, Sushil Jajodia, Lingyu Wang, eds., Security and Protection in Information Processing Systems, ISBN 1-4020-8142-1, Kluwer Academic Publishers, Boston, 2004, 562 pages.
14. Yves Deswarte, Frederic Cuppens, Sushil Jajodia, Lingyu Wang, eds., Information Security Management, Education, and Privacy, ISBN 1-4020-8144-8, Kluwer Academic Publishers, Boston, 2004, 328 pages.

Refereed Journal Papers:

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15. Saed Alrabaee*, Paria Shirani*, Lingyu Wang, Mourad Debbabi, "FOSSIL: A Resilient and Efficient System for Identifying FOSS Functions in Malware Binaries," *ACM Transactions on Privacy and Security (TOPS)*, Accepted.
 16. Suryadipta Majumdar*, Taous Madi*, Yushun Wang*, Yosr Jarraya, Makan Pourzandi, Lingyu Wang and Mourad Debbabi, "User-Level Runtime Security Auditing for the Cloud," *IEEE Transactions on Information Forensics and Security (TIFS)*, Vol. 13, No. 5, January 2018, pages 1185-1199.
 17. Alireza Shamel-Sendi, Michel Dagenaisb, Lingyu Wang, "Realtime Intrusion Risk Assessment Model based on Attack and Service Dependency Graphs," *Computer Communications*, Accepted.
 18. Yuan Hong, Wen Ming Liu*, Lingyu Wang, "Privacy Preserving Smart Meter Streaming against Information Leakage of Appliance Status," *IEEE Transactions on Information Forensics and Security (TIFS)*, Vol. 12, No. 9, September 2017, pages 2227 - 2241.
 19. Saed Alrabaee*, Lingyu Wang, Mourad Debbabi, "BinGold: Towards robust binary analysis by extracting the semantics of binary code as semantic flow graphs (SFGs)," *Digital Investigation*, Vol. 18, Supplement, 7 August 2016, pages S11–S22.
 20. Mengyuan Zhang*, Lingyu Wang, Sushil Jajodia, Anoop Singhal, Massimiliano Albanese, "Network Diversity: A Security Metric for Evaluating the Resilience of Networks against Zero-Day Attacks," *IEEE Transactions on Information Forensics and Security (TIFS)*, Vol. 11, No. 5, 2016, pages 1071–1086.
 21. Djedjiga Mouheb*, Dima Alhadidi, Mariam Nouh, Mourad Debbabi, Lingyu Wang, Makan Pourzandi, "Aspect-oriented modeling framework for security hardening," *Innovations in Systems and Software Engineering (ISSE)*, Vol. 12, No. 1, March 2016, pages 41–67.
 22. Ashkan Rahimian, Paria Shirani*, Saed Alrabaee*, Lingyu Wang, Mourad Debbabi, "BinComp: A Practical Approach to Compiler Provenance Attribution," *Digital Investigation*, Vol. 14, No. 1, 2015, pages S146–S155.
 23. Baojiang Cui, Fuwei Wang, Yongle Hao, Lingyu Wang, "A taint based approach for automatic reverse engineering of gray-box file formats," *Soft Computing*, September 2016, Volume 20, Issue 9, pp 3563–3578.
 24. Baojiang Cui, Zheli Liu, Lingyu Wang, "Key-Aggregate Searchable Encryption (KASE) for Group Data Sharing via Cloud Storage," *IEEE Transactions on Computers*, Vol. 65, No. 8, 2016, pages 2374-2385.
 25. Saed Alrabaee*, Paria Shirani*, Lingyu Wang, Mourad Debbabi, "SIGMA: A Semantic Integrated Graph Matching Approach for Identifying Reused Functions in Binary Code," *Digital Investigation*, Vol. 12, Supplement 1, March 2015, pages S61–S71.
 26. Wen Ming Liu*, Lingyu Wang, Lei Zhang, Shunzhi Zhu, "k-Jump: a Strategy to Design Publicly-Known Algorithms for Privacy Preserving Micro-Data Disclosure," *Journal of Computer Security*, Vol. 23, No. 2, pages 131-165, 2015.
 27. Zhen Xu, Cong Wang, Kui Ren, and Lingyu Wang, "Proof-carrying Cloud Computation: the Case of Convex Optimization," *IEEE Transactions on Information Forensics and Security (TIFS)*, Vol. 9, No. 11, November 2014, pages 1790-1803.
 28. Wen Ming Liu*, Lingyu Wang, Pengsu Cheng*, Kui Ren, Shunzhi Zhu and Mourad Debbabi, "PPTP: Privacy-Preserving Traffic Padding in Web-Based Applications," *IEEE Trans. on Dependable and Secure Computing (TDSC)*, Vol. 11, No. 6, December 2014, pages 538–552.

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29. Lingyu Wang, Sushil Jajodia, Anoop Singhal, Pengsu Cheng*, Steven Noel, "k-Zero day safety: A network security metric for measuring the risk of unknown vulnerabilities," *IEEE Trans. on Dependable and Secure Computing (TDSC)*, Vol. 11, No. 1, 2014, pages 30-44.
 30. Yong Zeng, Lingyu Wang (Eds.), "Secure collaboration in design and supply chain management (Special issue)," *Computers in Industry*, Volume 63, Number 6 (2012), 543-544.
 31. Yong Zeng, Lingyu Wang, Xiaoguang Deng, Xinlin Cao, Nafisa Khundker*, "Secure collaboration in global design and supply chain environment: Problem analysis and literature review," *Computers in Industry*, Volume 63, Number 6 (2012), pages 545-556.
 32. Da Yong Zhang*, Xinlin Cao, Lingyu Wang, Yong Zeng, "Mitigating the risk of information leakage in a two-level supply chain through optimal supplier selection," *Journal of Intelligent Manufacturing*, Volume 23, Number 4 (2012), pages 1351-1364.
 33. Da Yong Zhang*, Yong Zeng, Lingyu Wang, Hongtao Li, Yuanfeng Geng, "Modeling and evaluating information leakage caused by inferences in supply chains", *Computers in Industry*, Vol. 62, No. 3, April 2011, pages 351-363.
 34. Bo Zhu, Sanjeev Setia, Sushil Jajodia, and Lingyu Wang, "Providing Witness Anonymity under Peer-to-Peer Settings," *IEEE Transactions on Information Forensics and Security*, Vol. 5, No. 2, 2010, pages 324-336.
 35. Noman Mohammed*, Hadi Otrok, Lingyu Wang, Mourad Debbabi, and Prabir Bhattacharya, "Mechanism Design-Based Secure Leader Election Model for Intrusion Detection in MANET," *IEEE Transactions on Dependable and Secure Computing (TDSC)*, Vol. 8, No. 1, 2011, pages 89-103.
 36. Steven Noel, Lingyu Wang, Anoop Singhal, Sushil Jajodia, "Measuring security risks of networks using attack graphs," *International Journal of Next-Generation Computing*, Vol. 1, No. 1, July 2010, pages 113-123.
 37. Bo Zhu, Sanjeev Setia, Sushil Jajodia, Sankardas Roy, and Lingyu Wang, "Localized Multicast: Efficient and Distributed Replica Detection in Large-scale Sensor Networks," *IEEE Transactions on Mobile Computing (TMC)*, Vol. 8, No. 7, 2010, pages 913-926.
 38. Bo Zhu, Kui Ren, Lingyu Wang, and Mourad Debbabi, "PCM: A Privacy-Preserving Detection Mechanism in Mobile Ad Hoc Networks", *Wiley Security and Communication Networks (SCN)*, Volume 3, Issue 2-3, pages 167-184, 2010.
 39. B. C. M. Fung, K. Wang, L. Wang, and P. C. K. Hung, "Privacy-preserving data publishing for cluster analysis," *Data & Knowledge Engineering (DKE)*, Vol. 68, No. 6, pages 552-575.
 40. Chao Yao, Lingyu Wang, X. Sean Wang, Claudio Bettini, Sushil Jajodia, "Evaluating privacy threats in released database views by symmetric indistinguishability," *Journal of Computer Security*, Vol. 17, No. 1, pages 5-42.
 41. Chamseddine Talhi, Djedjiga Mouheb*, Vitor Nunes de Lima*, Mourad Debbabi, Lingyu Wang, Makan Pourzandi, "Usability of Security Specification Approaches for UML Design: A Survey," *Journal of Object Technology*, Vol. 8, No. 6, pages 102-122, 2009.
 42. Vitor Lima*, Djedjiga Mouheb*, Chamseddine Talhi, Mourad Debbabi, Lingyu Wang, Makan Pourzandi, "Formal Verification and Validation of UML 2.0 Sequence Diagrams using Source and Destination of Messages," *Proc. The 4th International Workshop on Systems Software Verification (SSV 2009)*, *Electronic Notes in Theoretical Computer Science (ENTCS)*, Vol. 254, pages 143-160.
 43. Lingyu Wang, Chao Yao, Anoop Singhal, Sushil Jajodia, "Implementing interactive analysis of attack graphs using relational databases," *Journal of Computer Security*, Vol. 16, No. 4, 2008, pages 419-436.

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44. Hadi Otrouk, Noman Mohammed*, Lingyu Wang, Mourad Debbabi and Prabir Bhattacharya, "A game-theoretic intrusion detection model for mobile ad-hoc networks," *Computer Communications, Special Issue on Algorithmic and Theoretical Aspects of Wireless Ad Hoc and Sensor Networks*, Vol. 31, No. 4, 2007, pages 708-721.
 45. Lingyu Wang, Yingjiu Li, Sushil Jajodia, Duminda Wijesekera, "Parity-based inference control for multi-dimensional range sum queries," *Journal of Computer Security*, Vol. 15, No. 4, 2007, pages 417-445.
 46. Lingyu Wang, Steven Noel, Sushil Jajodia, "Minimum-cost network hardening using attack graphs," *Computer Communications*, Volume 29, Issue 18, 28 November 2006, Pages 3812-3824.
 47. Lingyu Wang, Anyi Liu, Sushil Jajodia, "Using attack graphs for correlating, hypothesizing, and predicting network intrusion alerts," *Computer Communications*, Vol. 29, No. 15, 2006, pages 2917-2933.
 48. Lingyu Wang, Duminda Wijesekera, Sushil Jajodia, "Cardinality-based inference control in data cubes," *Journal of Computer Security*, Vol. 12, No. 5, 2004, pages 655-692.

Refereed Conference and Workshop Papers

49. Azadeh Tabiban*, Suryadipta Majumdar*, Lingyu Wang and Mourad Debbabi, "PERMON: An OpenStack Middleware for Runtime Security Policy Enforcement in Clouds," *Proc. the 4th IEEE Workshop on Security and Privacy in the Cloud (SPC 2018)*, Beijing, China, May 30-June 1, 2018.
50. Onur Duman*, Mengyuan Zhang*, Lingyu Wang, Mourad Debbabi, "Measuring the Security Posture of IEC 61850 Substations with Redundancy Against Zero Day Attacks," *Proc. the 2017 IEEE International Conference on Smart Grid Communications (SmartGridComm): Cyber Security and Privacy*, Dresden, Germany, October 23-26, 2017.
51. Suryadipta Majumdar*, Yosr Jarraya, Momen Oqaily*, Amir Alimohammadifar*, Makan Pourzandi, Lingyu Wang and Mourad Debbabi, "LeaPS: Learning-Based Proactive Security Auditing for Clouds," *Proc. the 22nd European Symposium on Research in Computer Security (ESORICS 2017)*, Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 10493, Oslo, Norway, September 11-15, 2017, pages xx-xx (Acceptance ratio 54/340≈16%).
52. Paria Shirani*, Lingyu Wang, Mourad Debbabi, "BinShape: Scalable and Robust Binary Library Function Identification Using Diverse Features," *Proc. the 14th Conference on Detection of Intrusions and Malware & Vulnerability Assessment (DIMVA'17)*, Bonn, Germany, July 6-7, 2017 (Acceptance ratio 18/67≈27%).
53. Daniel Borbor*, Lingyu Wang, Sushil Jajodia and Anoop Singhal, "Securing Networks against Unpatchable and Unknown Vulnerabilities Using Heterogeneous Hardening Options," *Proc. 31st Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSEC 2017)*, Springer-Verlag Lecture Notes in Computer Science (LNCS), Philadelphia, PA, USA, July 19-21, 2017.
54. Yushun Wang*, Taous Madi*, Suryadipta Majumdar*, Yosr Jarraya, Amir Alimohammadifar*, Makan Pourzandi, Lingyu Wang, Mourad Debbabi, "TenantGuard: Scalable Runtime Verification of Cloud-Wide VM-Level Network Isolation," *The Network and Distributed System Security Symposium (NDSS 2017)*, San Diego, USA, February 26-March 1, 2017 (Acceptance ratio 68/423≈16%).

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55. Suryadipta Majumdar*, Yosr Jarraya, Taous Madi*, Amir Alimohammadifar*, Makan Pourzandi, Lingyu Wang and Mourad Debbabi, "Proactive Verification of Security Compliance for Clouds through Pre-Computation: Application to OpenStack," Proc. the 21st European Symposium on Research in Computer Security (ESORICS 2016), Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 9878, Heraklion, Greece, September 26-30, 2016, pages 47-66 (Acceptance ratio 60/285~21%).
 56. Daniel Borbor*, Lingyu Wang, Sushil Jajodia and Anoop Singhal, "Diversifying Network Services under Cost Constraints for Better Resilience against Unknown Attacks," Proc. 30th Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSEC 2016) , Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 9766, Trento, Italy, July 18-21, 2016, pages 295-312.
 57. Taous Madi*, Suryadipta Majumdar*, Yushun Wang*, Yosr Jarraya, Makan Pourzandi, Lingyu Wang and Mourad Debbabi, "Auditing Security Compliance of the Virtualized Infrastructure in the Cloud: Application to OpenStack", Proc. The 6th ACM Conference on Data and Application Security and Privacy (CODASPY 2016), New Orleans, USA, March 09-11, 2016 (Acceptance ratio 22/115~19%).
 58. Nawaf Alhebaishi*, Lingyu Wang, Sushil Jajodia and Anoop Singhal, "Threat Modeling for Cloud Data Center Infrastructures," The 9th International Symposium on Foundations & Practice of Security (FPS 2016), Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 10128, Québec city, QC, Canada, 24-26 October 2016, pages 302-319.
 59. Mickael Emirkanian-Bouchard* and Lingyu Wang, "Towards Metric-Driven, Application-Specific Visualization of Attack Graphs," The 9th International Symposium on Foundations & Practice of Security (FPS 2016), Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 10128, Québec city, QC, Canada, 24-26 October 2016, pages 117-134.
 60. Saed Alrabaee*, Paria Shirani*, Mourad Debbabi and Lingyu Wang, "On the Feasibility of Malware Authorship Attribution," The 9th International Symposium on Foundations & Practice of Security (FPS 2016), Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 10128, Québec city, QC, Canada, 24-26 October 2016, pages 256-272.
 61. Suryadipta Majumdar*, Taous Madi*, Yushun Wang*, Yosr Jarrayay, Makan Pourzandi, Lingyu Wang and Mourad Debbabi, "Security Compliance Auditing of Identity and Access Management in the Cloud: Application to OpenStack," Proc. The 7th IEEE International Conference and on Cloud Computing Technology and Science (CloudCom 2015), Vancouver, Canada, November 30-December 3, 2015 (Acceptance ratio 48/189~25%).
 62. Lingyu Wang, Mengyuan Zhang*, Sushil Jajodia, Anoop Singhal, Massimiliano Albanese, "Modeling Network Diversity for Evaluating the Robustness of Networks against Zero-Day Attacks," Proc. 19th European Symposium on Research in Computer Security (ESORICS 2014), Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 8713, Wroclaw, Poland, September 7-11, 2014, pages 494-511 (Acceptance ratio 58/234~25%).
 63. Yuan Hong, Jaideep Vaidya, Haibing Lu and Lingyu Wang, "Collaboratively Solving Traveling Salesman Problem with Limited Disclosure," in Proceedings of the 28th Annual IFIP WG 11.3 Conference on Data and Applications Security and Privacy (DBSEC 2014), Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 8566, July 14-16, 2014, Vienna, Austria.
 64. Wen Ming Liu*, Lingyu Wang, Kui Ren and Mourad Debbabi, "Background Knowledge-Resistant Traffic Padding for Preserving User Privacy in Web-Based Applications," Proc. The 5th IEEE International Conference and on Cloud Computing Technology and Science (CloudCom 2013), Bristol, UK, December 2-5, 2013 (Acceptance ratio 11/60~18%).

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65. William Nzoukou Tankou*, Lingyu Wang, Sushil Jajodia and Anoop Singhal, "A unified framework for measuring a network's mean time-to-compromise," Proc. 32nd IEEE International Symposium on Reliable Distributed Systems (SRDS 2013), Braga, Portugal, September 30 - October 3, 2013.
 66. Massimiliano Albanese, Sushil Jajodia, Anoop Singhal, Lingyu Wang, "An efficient approach to assessing the risk of zero-day vulnerabilities," Proc. 10th International Conference on Security and Cryptography (SECRYPT 2013), Reykjavik, Iceland, July 29-31, 2013 (Best Paper Award).
 67. Zhen Xu, Cong Wang, Qian Wang, Kui Ren, and Lingyu Wang, "Proof-carrying Cloud Computation: the Case of Convex Optimization," Proc. IEEE INFOCOM mini-conference, 2013 (Acceptance ratio 25%).
 68. Pengsu Cheng*, Lingyu Wang, Sushil Jajodia, Anoop Singhal, "Aggregating CVSS base scores for semantics-rich network security metrics," Proc. 31st IEEE International Symposium on Reliable Distributed Systems (SRDS 2012), Irvine, California, October 8-11, 2012 (Acceptance Ratio 28/114≈25%).
 69. Wen Ming Liu*, Lingyu Wang, Kui Ren, Pengsu Cheng* and Mourad Debbabi, "k-Indistinguishable Traffic Padding in Web Applications," Proc. The 12th Privacy Enhancing Technologies Symposium (PETS 2012), July 11–13, 2012, Vigo, Spain, pages 79-99 (Acceptance Ratio 16/72≈22%).
 70. Wen Ming Liu*, Lingyu Wang, "Privacy Streamliner: A Two-Stage Approach to Improving Algorithm Efficiency," Proc. The 2nd ACM Conference on Data and Applications Security (CODASPY 2012), Feb 7-9, 2012 (Acceptance Ratio 21/113≈19%).
 71. Wen Ming Liu*, Lingyu Wang, Pengsu Cheng*, Mourad Debbabi, "Privacy-Preserving Traffic Padding in Web-Based Applications," Proc. Workshop on Privacy in the Electronic Society (WPES 2011), October 11, 2011. (Short Paper).
 72. Lingyu Wang, Sushil Jajodia, Anoop Singhal, Steven Noel, "k-Zero day safety: Measuring the security risk of networks against unknown attacks," Proc. 15th European Symposium on Research in Computer Security (ESORICS 2010), Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 6345, 20-22 September, 2010, pages 573-587 (Acceptance ratio 42/201≈21%).
 73. Wen Ming Liu*, Lingyu Wang, Lei Zhang, "K-Jump Strategy for Privacy Preserving Micro-Data Disclosure," Proc. 13th International Conference on Database Theory (ICDT 2010), March 22-26, 2010, ACM Press, pages 104-115.
 74. Djedjiga Mouheb*, Chamseddine Talhi, Mariam Nouh, Vitor Lima*, Mourad Debbabi, Lingyu Wang, Makan Pourzandi, "Aspect-Oriented Modeling for Representing and Integrating Security Concerns in UML," Proc. 8th IEEE/ACIS International Conference on Software Engineering Research, Management and Applications (SERA 2010), May 24 - 26, 2010, pages 197-213.
 75. Djedjiga Mouheb*, Dima Alhadidi, Mariam Nouh, Mourad Debbabi, Lingyu Wang, Makan Pourzandi, "Aspect Weaving in UML Activity Diagrams: A Semantic and Algorithmic Framework," 7th International Workshop on Formal Aspects of Component Software (FACS 2010), pages 182-199, 2010.
 76. Mariam Nouh, Raha Ziarati*, Djedjiga Mouheb*, Dima Alhadidi, Mourad Debbabi, Lingyu Wang, Makan Pourzandi, "Aspect Weaver: A Model Transformation Approach for UML Models," Proc. 20th International Conference of the Center for Advanced Studies on Collaborative Research (CASCON 2010), November 7 - 10, 2010.
 77. Pengsu Cheng*, Lingyu Wang, Tao Long*, "Compressing Attack Graphs through Reference Encoding," Proc. 3rd IEEE International Symposium on Trust, Security and Privacy for

- Emerging Applications (TSP 2010), June 29-July 1, 2010, pages 1026-1031 (Acceptance ratio 45/115).
78. Thomas Ormerod*, Lingyu Wang, Mourad Debbabi, Amr Youssef, Hamad Binsalleeh, Amine Boukhtouta, and Prosenjit Sinha, "Defaming Botnet Toolkits: A Bottom-Up Approach to Mitigating the Threat," Proc. 4th International Conference on Emerging Security Information, Systems and Technologies (SECURWARE 2010), July 18-25, 2010, pages 195-200.
 79. Hamad Binsalleeh, Thomas Ormerod*, Amine Boukhtouta, Prosenjit Sinha, Amr Youssef, Mourad Debbabi, Lingyu Wang, "On the Analysis of the Zeus Botnet Crimeware Toolkit," Proc. 8th Annual Conference on Privacy, Security and Trust (PST 2010), August 17-19, 2010, pages 195-200 (Best Paper Award).
 80. Serguei A. Mokhov, Jian Li, Lingyu Wang, "Simple Dynamic Key Management in SQL Randomization," Proc. The 3rd IFIP International Conference on New Technologies, Mobility and Security (NTMS 2009), December 20 - 23, 2009, pages 458-462 (Acceptance ratio 64/200).
 81. Lei Zhang, Lingyu Wang, Sushil Jajodia, Alexander Brodsky, "L-Cover: Preserving Diversity by Anonymity," Proc. 6th VLDB Workshop on Secure Data Management (SDM 2009), Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 5776, August 28, 2009, pages 158-171.
 82. Djedjiga Mouheb*, Chamseddine Talhi, M. Azzam, Vitor Lima*, Mourad Debbabi, Lingyu Wang, Makan Pourzandi, "An Aspect-Oriented Approach for Software Security Hardening: from Design to Implementation," Proc. The 8th International Conference on Software Methodologies, Tools and Techniques (SOMET 2009), September 23 - 25, 2009, pages 203-222.
 83. Djedjiga Mouheb*, Chamseddine Talhi, Vitor Lima*, Mourad Debbabi, Lingyu Wang, Makan Pourzandi, "Weaving Security Aspects into UML 2.0 Design Models," Proc. The 13th Aspect Oriented Modeling Workshop (AOM 2009), March 2, 2009, ACM Press, pages 7-12.
 84. Yiming Wang*, Lingyu Wang, B. C. M. Fung, "Preserving Privacy for Location-Based Services with Continuous Queries," Proc. The IEEE International Conference on Communications - Communication and Information Systems Security Symposium (ICC 2009), June 14-18, 2009.
 85. Tania Islam*, Lingyu Wang, "A Heuristic Approach to Reducing the Cost of Network Hardening Using Attack Graph," Proc. The 2nd IFIP International Conference on New Technologies, Mobility and Security (NTMS 2008), November 5 - 7, 2008, IEEE Press.
 86. Shuai Liu*, Wei Li*, Lingyu Wang, "Towards Efficient Over-encryption in Outsourced Databases Using Secret Sharing," Proc. The 2nd IFIP International Conference on New Technologies, Mobility and Security (NTMS 2008), November 5 - 7, 2008, IEEE Press.
 87. Marcel Frigault*, Lingyu Wang, Anoop Singhal, Sushil Jajodia, "Measuring network security using Dynamic Bayesian network," Proc. 4th ACM Workshop on Quality of Protection (QoP), October 27, 2008, pages 23-30.
 88. Hadi Otrouk, Noman Mohammed*, Lingyu Wang, Mourad Debbabi and Prabir Bhattacharya, "A Moderate to Robust Game Theoretical Model for Intrusion Detection in MANETs," Proc. International Workshop on Security and Privacy in Wireless and Mobile Computing, Networking and Communications (SecPri_WiMob 2008), October 12, 2008, IEEE Press, pages 608-612.
 89. Feng Chen, Lingyu Wang, Jinshu Su, "An Efficient Approach to Minimum-Cost Network Hardening Using Attack Graphs," Proc. The Fourth International Conference on Information Assurance and Security (IAS 2008), September 8-10, 2008, IEEE Press, pages 209 - 212.
 90. Serguei A. Mokhov, Farid Rassai, Lee Wei Huynh, Lingyu Wang, "The Authentication Framework within the Java Data Security Framework (JDSF): Design and Implementation

- Refinement,” Proc. International Conference on Telecommunications and Networking (TeNe 2008), December 5-13, 2008, pages 423-429.
91. Serguei A. Mokhov, Lee Wei Huynh, Lingyu Wang, “The Integrity Framework within the Java Data Security Framework (JDSF): Design and Implementation Refinement,” Proc. International Conference on Telecommunications and Networking (TeNe 2008), December 5-13, 2008, pages: 449-455.
 92. Marcel Frigault*, Lingyu Wang, “Measuring Network Security Using Bayesian Network-Based Attack Graphs,” Proc. The 3rd IEEE International Workshop on Security, Trust, and Privacy for Software Applications (STPSA 2008), July 28 - August 1, 2008, pages 698-703.
 93. Hong Yuan*, Shuo Lu*, Qian Liu*, Lingyu Wang, Rachida Dssouli, “Preserving Privacy in e-Health Systems Using Hippocratic Database,” Proc. The 3rd IEEE International Workshop on Security, Trust, and Privacy for Software Applications (STPSA 2008), July 28 - August 1, 2008, pages 692-697.
 94. Lingyu Wang, Tania Islam*, Tao Long*, Anoop Singhal, and Sushil Jajodia, “An Attack Graph-Based Probabilistic Security Metric,” Proc. 22nd Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSEC 2008), Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 5094, July 13-16, 2008, pages 283-296.
 95. Lei Zhang, Lingyu Wang, Sushil Jajodia, Alexander Brodsky, “Exclusive Strategy for Generalization Algorithms in Micro-Data Disclosure,” Proc. 22nd Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSEC 2008), Springer-Verlag Lecture Notes in Computer Science (LNCS), Vol. 5094, July 13-16, 2008, pages 190-204.
 96. Wei Li*, Lingyu Wang, Bo Zhu, Lei Zhang, “An Integrity Lock Architecture for Supporting Distributed Authorizations in Database Federations,” Proc. 23rd International Information Security Conference (SEC 2008), September 8-10, 2008, pages 189-203 (Acceptance ratio 42/143).
 97. B. C. M. Fung, K. Wang, L. Wang, and M. Debbabi, “A Framework for Privacy-Preserving Cluster Analysis,” Proc. IEEE International Conference on Intelligence and Security Informatics (IEEE ISI 2008), Springer-Verlag Lecture Notes in Computer Science (LNCS), 2008, To appear (Acceptance ratio 22%).
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Security Metrics
Attack Graph
Cloud Security
Privacy

	All	Since 2013
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