

Lingyu Wang

(As of January 2011)

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RESEARCH INTERESTS

Security and Privacy. Specifically, data privacy, database security, security metrics, botnet defense, and intrusion detection.

EDUCATION

- | | |
|-----------|---|
| 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

- | | |
|--------------|--|
| 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

(An asterisk (*) indicates the co-author was my student)

Authored Book:

1. Lingyu Wang, Sushil Jajodia, Duminda Wijesekera, "Preserving Privacy in On-line Analytical Processing (OLAP)," ISBN: 0-387-46273-2, Springer, Berlin, 2007, 190 Pages.

Book Chapters:

2. Lingyu Wang, Sushil Jajodia, "An approach to preventing, correlating, and predicting multistep network attacks," in *Intrusion Detection Systems*, Roberto Di Pietro and Luigi V. Mancini, eds., Springer, New York, 2008, pages 93-128.
3. Lingyu Wang, Sushil Jajodia, "Security in data warehouses and OLAP systems," in *Handbook of Database Security: Applications and Trends*, Michael Gertz and Sushil Jajodia, editors, Springer, New York, 2008, pages 191-212.
4. Lingyu Wang, Sushil Jajodia, "Vulnerability-centric alert correlation," in *Information Assurance: Dependability and Security in Networked Systems*, Yi Qian, James Joshi, David Tipper, Prashant Krishnamurthy, editors, Morgan Kaufmann, Amsterdam, 2008, pages 279-304.

5. 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.

Edited Books:

6. 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.
7. 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:

8. 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*, Accepted (pending minor revisions).
9. 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*. Accepted.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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.
15. Benjamin Fung, Ke Wang, Lingyu Wang, and Patrick Hung, "Privacy-preserving data publishing for cluster analysis," *Data & Knowledge Engineering (DKE)*, Vol. 68, No. 6, 2009, pages 552-575.
16. 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, 2009.
17. 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.
18. 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.
19. Hadi Otrok, 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.
20. 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.
21. 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.
22. 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.
23. 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:

24. 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)*, 20-22 September, 2010, pages 573-587 (Acceptance ratio 42/201).

25. 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, pages 104-115.
26. 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).
27. 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.
28. 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.
29. 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).
30. 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.
31. 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 1-5.
32. 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.
33. 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.
34. 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.
35. 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.
36. Yiming Wang*, Lingyu Wang, B. C. M. Fung, "Preserving Privacy for Location-Based Services with Consecutive Queries," Proc. The IEEE International Conference on Communications - Communication and Information Systems Security Symposium (ICC 2009 CISS), June 14-18, 2009, pages 1-5.
37. 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, pages 1-5.
38. 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, pages 1-5.
39. 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.
40. 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.
41. 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.

42. 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.
43. 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.
44. 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.
45. 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.
46. 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.
47. 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.
48. 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).
49. 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%).
50. Da Yong Zhang*, Lingyu Wang, Yong Zeng, "Secure Collaborative Product Development: a Literature Review," Proc. 5th International Conference on Product Lifecycle Management (PLM 2008), July 9-11, 2008, To appear.
51. Bo Zhu, Kui Ren, Lingyu Wang, "Anonymous Misbehavior Detection in Mobile Ad Hoc Networks," Proc. 1st IEEE International Workshop on Wireless Security and Privacy (WiSP 2008), June 20, 2008, pages 358-363.
52. Djedjiga Mouheb*, Mourad Debbabi, Lingyu Wang, Makan Pourzandi, "UML-Based Approaches for the Development of Secure Software and Systems: A Comparative Study," Proc. 2nd Workshop on Practice and Theory of IT Security (PTITS 2008), January 23, 2008, pages 15-20.
53. Noman Mohammed*, Hadi Otrok, Lingyu Wang, Mourad Debbabi, Prabir Bhattacharya, "A Mechanism Design-Based Multi-Leader Election Scheme for Intrusion Detection in MANET," Proc. of the IEEE Wireless Communications and Networking Conference (WCNC 2008), March 31-April 4, 2008, pages 2816-2821.
54. Qian Liu*, Shuo Lu*, Hong Yuan*, Lingyu Wang, Rachida Dssouli, "Securing Telehealth Applications in a Web-Based e-Health Portal," Proc. 3rd International Conference on Availability, Reliability and Security (ARES 2008), IEEE Press, March 4-7, 2008, pages 3-9.
55. Shuo Lu*, Hong Yuan*, Qian Liu*, Lingyu Wang, Rachida Dssouli, "Access Control in e-Health Portal Systems," Proc. 4th International Conference on Innovations in Information Technology (Innovations 2007), IEEE Press, November 18-20, 2007, pages 88-92.
56. Hong Yuan*, Shuo Lu*, Qian Liu*, Lingyu Wang, Rachida Dssouli, "A Hierarchical Approach to the Specification of Privacy Preferences," Proc. 4th International Conference on Innovations in Information Technology (Innovations 2007), IEEE Press, November 18-20, 2007, pages 660-664.
57. Lingyu Wang, Anoop Singhal, Sushil Jajodia, "Toward Measuring Network Security Using Attack Graphs," Proc. 3rd International Workshop on Quality of Protection (QoP 2007), Oct 29, 2007, pages 49-54.
58. Hadi Otrok, Noman Mohammed*, Lingyu Wang, Mourad Debbabi, Prabir Bhattacharya, "An Efficient And Truthful Leader IDS Election Mechanism for MANET," Proc. of the 3rd IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob 2007), October 8 - 10, 2007, pages 78.
59. Lingyu Wang, Anoop Singhal, Sushil Jajodia, "Measuring the overall security of network configurations using attack graphs," Proc. 21st Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSec 2007), Springer Lecture Notes in Computer Science, Vol. 4602, Steve Barker and Gail-Joon Ahn, eds., Redondo Beach, CA, July 8-11, 2007, pages 98-112 (Acceptance ratio 18/44).

60. Xuxin Xu*, Lingyu Wang, Amr Youssef, Bo Zhu, "Preventing collusion attacks on the one-way function tree (OFT) scheme," Proc. 5 th International Conference on Applied Cryptography and Network Security (ACNS 2007), Springer-Verlag Lecture Notes in Computer Science, Vol. 4521, pages 177-193 (Acceptance ratio 31/260), June 5-8, 2007.
61. Chao Yao, Lingyu Wang, X. Sean Wang, Sushil Jajodia, "Indistinguishability: the other aspect of privacy," Proc. 3rd VLDB Workshop on Secure Data Management (SDM 2006), Springer Lecture Notes in Computer Science, Vol. 4165, September 10-11, 2006, pages 1-17.
62. Lingyu Wang, Chao Yao, Anoop Singhal, Sushil Jajodia, "Interactive Analysis of Attack Graphs Using Relational Queries," Proc. 20th IFIP WG 11.3 Working Conference on Data and Applications Security (DBSec 2006), Springer-Verlag Lecture Notes in Computer Science, Vol. 4127, July 2006, pages 119-132 (Acceptance ratio 22/55).
63. Lingyu Wang, Anyi Liu, Sushil Jajodia, "An efficient and unified approach to correlating, hypothesizing, and predicting network intrusion alerts," Proc. 10th European Symposium on Research in Computer Security (ESORICS 2005), September 2005, pages 247-266 (Acceptance ratio 26/158).
64. Lingyu Wang, Sushil Jajodia, Duminda Wijesekera, "Securing OLAP data cubes against privacy breaches," Proc. IEEE Symposium on Security and Privacy (S&P 2004), May 2004, pages 161-175 (Acceptance ratio 19/180).
65. Lingyu Wang, Duminda Wijesekera, Sushil Jajodia, "A logic-based framework for attribute based access control," Proc. 2nd ACM Workshop on Formal Methods in Security Engineering (FMSE 2004), October 2004, pages 45-55 (Acceptance ratio 9/25).
66. Lingyu Wang, Yingjiu Li, Duminda Wijesekera, Sushil Jajodia, "Precisely answering multidimensional range queries without privacy breaches," Proc. 8th European Symposium on Research in Computer Security (ESORICS 2003), October 2003, pages 100-115 (Acceptance ratio 19/114).
67. Lingyu Wang, Duminda Wijesekera, Sushil Jajodia, "Towards secure XML federations," Proc. 17th IFIP WG 11.3 Working Conference on Data and Application Security (DBSec 2003), August 2003, pages 117-131 (Acceptance ratio 25/50).
68. Lingyu Wang, Duminda Wijesekera, Sushil Jajodia, "Cardinality-based inference control in sum-only data cubes," Proc. 7th European Symposium on Research in Computer Security (ESORICS 2002), October 2002, pages 55-71 (Acceptance ratio 16/83).
69. Yingjiu Li, Lingyu Wang, X. Sean Wang, Sushil Jajodia, "Auditing interval-based inference," Proc. 14th Conference on Advanced Information Systems Engineering (CAiSE 2002), Springer-Verlag Lecture Notes in Computer Science, Vol. 2348, May 2002, pages 553-568 (Acceptance ratio 42/173).
70. Yingjiu Li, Lingyu Wang, Sushil Jajodia, "Preventing interval-based inference by random data perturbation," Proc. 1st Workshop on Privacy Enhancing Technologies (PET 2002), Springer-Verlag Lecture Notes in Computer Science, Vol. 2482, April 2002, pages 160-170 (Acceptance ratio 16/47).
71. Yingjiu Li, Senchun Zhu, Lingyu Wang, Sushil Jajodia, "A privacy-enhanced microaggregation method," Proc. 2nd Symposium on Foundations of Information and Knowledge Systems (FoIKS 2002), Springer-Verlag Lecture Notes in Computer Science, Vol. 2284, February 2002, pages 148-159 (Acceptance ratio 15/55).

GRANT

Title: Defending Against Multi-Step Intrusions in Large-Scale Computer Networks

Source: The Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant

Amount: 107,500

Duration: 2008-2012

Principal Investigator

Title: Une Approche Quantitative pour la Modélisation et pour la Défense des Réseaux Contre les Intrusions

Source: Le Fonds québécois de la recherche sur la nature et les technologies (FQRNT) Grant

Amount: 40,000

Duration: 2009-2011

Principal Investigator

Title: Une Approche Quantitative pour la Modélisation et pour la Défense des Réseaux Contre les Intrusions

Source: Le Fonds québécois de la recherche sur la nature et les technologies (FQRNT) Equipment Grant

Amount: 40,644

Duration: 2009-2010

Principal Investigator

Title: Model-Based Framework for the Engineering of Secure Software and Systems
Source: The Natural Sciences and Engineering Research Council of Canada (NSERC) CRD and Ericsson Canada
Amount: 324,000
Duration: 2009-2011
Co-Investigator

Title: Model-Based Engineering for Secure Software and Systems
Source: PROMPT Quebec Grant
Amount: 104,000
Duration: 2009-2010
Co-Investigator

Title: Techniques for Botnet Analysis, Detection and Tracking
Source: Concordia University Seed Grant
Amount: 15,000
Duration: 2009-2010
Principal Investigator

Title: Security and Privacy of User-Generated Data for Personalized Cloud Computing Services
Source: The Natural Sciences and Engineering Research Council of Canada (NSERC) Strategic Grant
Amount: 482,100
Duration: 2010-2013
Co-Investigator

GRADATE STUENT SUPERVISION

Completed:

1. Xuxin Xu, M.A.Sc (2005.9 – 2007.11), thesis title: “Preventing collusion attacks on the one-way function tree (OFT) scheme” (co-directed with Amr Youssef).
2. Yuan Hong, M.Comp.Sc. (2005.9 – 2008.2), thesis title: “Preserving privacy in Web-based eHealth systems” (co-directed with Rachida Dssouli).
3. Shuo Lu, M.Comp.Sc. M.A.Sc (2005.9 – 2008.3), thesis title: “Architecture design and access control of eHealth portals” (co-directed with Rachida Dssouli).
4. Qian Liu, M.Comp.Sc. (2005.9 – 2008.3), thesis title: “Securing Telehealth applications in a Web-based eHealth portal” (co-directed with Rachida Dssouli).
5. Noman mohammed, M.A.Sc (2007.6 – 2008.5), thesis title: “Mechanism design-based leader election scheme for intrusion detection in MANET” (co-directed with Mourad Debbabi).
6. Wei Li, M.A.Sc (2007.6 – 2008.5), thesis title: “Distributed authorization in loosely coupled database federation”.
7. Tao Long, M.A.Sc (2006.9 – 2009.3), thesis title: “Attack graph compression”.
8. Tania Islam, M.A.Sc. (2006.9 – 2009.4), thesis title: “A heuristic approach to network hardening using attack graphs”.
9. Wen Ming Liu, M.A.Sc. (2007.9 – 2008.12), thesis title: “On applications of simulated annealing to cryptology”.
10. Da Yong Zhang, M.A.Sc (2008.1 – 2009.12), thesis title: “Modeling and evaluating information leakage caused by inferences in supply chains” (co-directed with Yong Zeng).
11. Vitor Nunes de Lima, M.A.Sc. (2008.1 – 2009.12), thesis title: “Framework for automatic verification of UML Design models: application to UML 2.0 interactions” (co-directed with Mourad Debbabi).
12. Marcel Frigault, M.A.Sc. (2007.6 – 2009.3), thesis title: “Measuring network security using Bayesian networks-based attack graphs”.
13. Yiming Wang, M.A.Sc. (2007.9 – 2009.4), thesis title: “Privacy preservation in location-based services with continuous queries”.
14. Shuai Liu, M.A.Sc. (2007.9 – 2009.1), thesis title: “Localizing unauthorized updates in published micro-data tables through secret order-based watermarking”.
15. Li Deng, M.A.Sc. (2008.1 – 2010.10), thesis title: “Preserving Privacy for Micro-Databases”.

In Progress:

16. Djedjiga Mouheb, Ph.D. (2008.1 – now), thesis topic: TBD (co-directed with Mourad Debbabi).
17. Wen Ming Liu, Ph.D. (2009.1 – now), thesis topic: TBD.
18. Hongying Tang, Ph.D. (2010.9 – now), thesis topic: TBD (co-directed with Mourad Debbabi).
19. Thomas Ormerod, M.A.Sc. (2009.1 – now), thesis topic: TBD (co-directed with Mourad Debbabi).
20. Pengsu Cheng, M.A.Sc. (2009.9 – now), thesis topic: TBD.
21. Raha Ziarati, M.A.Sc. (2009.9 – now), thesis topic: TBD (co-directed with Mourad Debbabi).
22. William Nzoukou Tankou, M.A.Sc. (2011.1 – now), thesis topic: TBD.
23. Taher Adel Mohamed, M.A.Sc. (2011.1 – now), thesis topic: TBD (co-directed with Mourad Debbabi).

TEACHING

1. INSE 6160 (Database Security and Privacy) Winter 2010, Concordia University, 36 Students
2. INSE 6130 (Operating System Security) Fall 2009, Concordia University, 42 Students
3. INSE 691A (Database Security and Privacy) Winter 2009, Concordia University, 29 Students
4. INSE 6130 (Operating System Security) Fall 2008, Concordia University, 55 Students
5. INSE 6150 (Security Evaluation Methodologies) Winter 2008, Concordia University, 64 Students
6. INSE 691A (Database Security and Privacy) Winter 2008, Concordia University, 36 Students
7. INSE 6110 (Foundations of Cryptography) Fall 2007, Concordia University, 43 Students
8. INSE 6130 (Operating System Security) Fall 2007, Concordia University, 59 Students
9. INSE 691A (Database Security and Privacy) Winter 2007, Concordia University, 25 Students
10. COMP 249 (Programming Methodology) Winter 2007, Concordia University, 49 Students
11. INSE 6130 (Operating System Security) Fall 2006, Concordia University, 40 Students
12. ISA 662 (Information System Security) Fall 2005, George Mason University, 12 Students

PROFESSIONAL ACTIVITIES

- Review panelist, The National Science Foundation (NSF), 2010.
- External reviewers, The Natural Sciences and Engineering Research Council of Canada (NSERC), 2009-2010
- PC Co-Chair, The 6th IEEE International Workshop on Security, Trust, and Privacy for Software Applications (STPSA'11), Munich, Germany, July 18-22, 2011.
- PC Co-Chair, Special Track of SDPS 2011 on Secure Collaboration in Global Design and Supply Chain Management, Jeju Island, Korea, June 12-16, 2011.
- PC Member, The 14th Information Security Conference (ISC'11), Xian, China on October 26-29, 2011.
- PC Member, The IEEE GLOBECOM 2011 Communications and Systems Security (GLOBECOM'11), Houston, Texas, USA, 5-9 December 2011.
- PC Member, The International Conference on Security and Cryptography (SECRYPT'11), Seville, Spain, July 18-21, 2011.
- PC Member, The 25th Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSec'11), Richmond, Virginia, USA, June 11-13, 2011.
- PC Member, The 8th IEEE/FTRA International Conference on Secure and Trust Computing, data management, and Applications (STA'11), Crete, Greece, June 28-30, 2011.
- PC Member, The 4th International Conference on New Technologies, Mobility and Security (NTMS'11), Paris, France, February 7-10, 2011.
- PC Member, IEEE Consumer Communications and Networking Conference (CCNC'11), Las Vegas, USA, January 8-11, 2011.
- PC Member, The 5th IEEE International Workshop on Security, Trust, and Privacy for Software Applications (STPSA'10), Seoul, South Korea, July 19-23, 2010.
- PC Member, First International Workshop on Data Management and Network Control in Wireless Networks (DMNC'10), Beijing, China, August 8-15, 2010.
- Local Arrangements Chair, The 23rd Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSec'09), Concordia University, Montreal, Canada, July 12-15, 2009
- PC Member, IEEE Vehicular Technology Conference (VTC'10-Fall) Ad-Hoc and Sensor Network Track, Ottawa, Canada, September 6-9, 2010.
- PC Member, International Conference on Security and Cryptography (SECRYPT'10), Athens, Greece, July 26-28, 2010.

- PC Member, The 24th Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSec'10), Rome, Italy, June 21-23, 2010.
- PC Member, The IEEE International Conference on Intelligence and Security Informatics (ISI'10), Vancouver, Canada, May 23-26, 2010.
- PC Member, The IEEE GLOBECOM 2010 Communications and Systems Security (GLOBECOM'10), Miami, USA, December 6-10, 2010.
- PC Member, The Second International Symposium on Data, Privacy, & E-Commerce (ISDPE'10), Buffalo/Niagara Fall, USA, June 20-22, 2010.
- PC Member, The Third International Conference on New Technologies, Mobility and Security (NTMS'09), Cairo, Egypt, December 20-23, 2009.
- PC Member, The 12th Information Security Conference (ISC'09), Pisa, Italy, September 7-9, 2009.
- PC Member, The 7th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC'09), Vancouver, Canada, August 29-31, 2009.
- PC Member, Graduate Student Symposium at the 7th Annual Conference on Privacy, Security and Trust (PST 2009) and the 9th World Congress on the Management of e-Business, New Brunswick, Canada, August 25-27, 2009.
- PC Member, The 4th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob'09), Marrakech, Morocco, October 12-14, 2009.
- PC Member, International Conference on Security and Cryptography (SECRYPT'09), Milan, Italy, July 7-10, 2009.
- PC Member, The 4th IEEE International Workshop on Security, Trust, and Privacy for Software Applications (STPSA'09), Seattle, USA, July 20 - July 24, 2009.
- PC Member, The First International Conference on Network and Service Security (N2S'09), Paris, France, June 24-26, 2009.
- PC Member, The IEEE International Conference on Communications (Wireless Networking Symposium) (ICC'09), Dresden, Germany, 14-18 June, 2009
- PC Member, The 2008 International Workshop on Secure Vehicular Ad-Hoc Networks (SVANET'08), Sydney, Australia, December 10-12, 2008
- PC Member, The second International Conference on New Technologies, Mobility and Security (NTMS'08), Tangier, Morocco, November 5-7, 2008
- PC Member, The Sixth Annual Conference on Privacy, Security and Trust (PST'08) Graduate Student Symposium, Fredericton, New Brunswick, Canada, October 1-3, 2008
- PC Member, The 4th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob'08), Avignon, France, October 12-14, 2008
- PC Member, The 13th European Symposium on Research in Computer Security (ESORICS'08), Malaga, Spain, October 6-10, 2008
- PC Member, The 3rd IEEE International Workshop on Security, Trust, and Privacy for Software Applications (STPSA'08), Turku, Finland, July 28 - August 1, 2008
- PC Member, The 23rd International Information Security Conference (SEC'08), Milan, Italy, September 8-10, 2008
- PC Member, The 2nd IEEE International Workshop on Security, Trust, and Privacy for Software Applications (STPSA'07), April, 2007
- PC Member, The 3rd International Workshop on Information Assurance (WIA'07), April, 2007
- PC Member, Workshop on Security and Trust in Decentralized/Distributed Data Structures (STD3S '06), April, 2006
- PC Member, The Eighth International Conference on Electronic Commerce (ICEC'06)

Conference Paper Referee

- ISWCS 2010, WCNC 2009, ESSoS 2009, AMCIS 2008, ARES 2008, VTC 2008, INNOVATIONS 2007, STPSA 2007, DSN 2007, WIA 2007, SDM 2006, ACSAC 2006, ESORICS 2006, VLDB 2006, ICEC 2006, IS 2006, IWAP 2006, GLOBECOM 2006, ESORICS 2005, ICDE 2005, ESORICS 2004, ACM CCS 2003, MMM-ACNS 2005, EuroPKI 2004, WCC2004-SEC, WISE 2004, CAiSE 2003, INDOCRYPT 2002

Journal Paper Reviewer

- ACM Transactions on Information and System Security (ACM TISSEC), Journal of Computer Security (JCS), Journal of Computer and System Science (JCSS), IEEE Transactions on Services Computing (TSC), IEEE Transactions on Knowledge and Data Engineering (TKDE), International Journal of Cooperative Information Systems (IJCIS), Journal of Database Management (JDM), Journal of Systems and Software (JSS), Journal of

Autonomous Agents and Multi-Agent Systems (JAAMAS), The Computer Journal (COMPJ), Wireless Personal Communications (WPC), Computer Communications (COMCOM), Data & Knowledge Engineering (DKE), IET Information Security (IET-IFS), Wiley Security and Communication Networks (SCN), IEEE Security & Privacy, Wireless Personal Communications (WPC), International Journal of Computers and Applications

HONORS AND AWARDS

1. Early Promotion to Associate Professor, Concordia University, 2010
2. Outstanding Graduate Award, School of Information Technology and Engineering, George Mason University, 2005
3. High-Potential Graduate Research Assistant Fellowship, George Mason University, 2000-2003
4. Outstanding Graduate Award, Shanghai Jiao Tong University, 1996
5. Liuyuan-Shengyudu Scholarship, Shanghai Jiao Tong University, 1993
6. Outstanding Graduate Award, Shenyang Institute of Aeronautical Engineering, 1993
7. Scholarships, Shenyang Institute of Aeronautical Engineering, 1989-1993