Lotfi ben Othmane
Curriculum Vitae

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index.html

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Research interests

Secure Development of Cyber-Physical Systems.

Education

2010	Ph.D.	Western Michigan University (WMU), USA (Computer Science)
2000	M.Sc.	University of Sherbrooke, Canada (Computer Science)
1995	B.Sc.	University of Sfax, Tunisia (Computer Science Applied to Management)

Work Experience

Jan. 2017-	Assistant Teaching Professor, Iowa State University, US Title changed from Lecturer in July 2019
2014-2016	Head of the Secure Software Engineering Department, Fraunhofer Secure Information Technology, Germany Research Scientist until Oct. 2015
2014-2016	Lecturer, Technical University Darmstadt, Germany
2011-2013	Postdoc, Eindhoven University of Technology, The Netherlands
2010-2011	Visiting Assistant Professor, Kalamazoo College, USA
2008-2011	Teaching and Research Assistant, Western Michigan University, USA

Industry

2005-2007	System Analyst, ABA International, USA
2004-2005	Software Architect, International Air Transportation Association, Canada
2003-2004	Consultant, Gestion Informatique OKA LTEE, Canada
2001-2003	Applications Architect, Documens, Canada
1998-2001	Information and Methodology Director, "Les Laboratoires Reunis", Tunisia
1997-1998	Technical Analyst, "Societe des Services Generaux", Tunisia
1995-1996	Technology Manager, SNA (subsidiary of POULINA Group), Tunisia

Professional committees and memberships

- IEEE Cybersecurity Ambassador, 2016-current

- IEEE Senior Member, since 2017

Initiated Startups

1. Brainsoft–Develop and commercialize software for controlling physical objects using brainwaves. Initiated with former Master student Nick Schmidt.

2. SecureAuto–Develop and commercialize a platform to detect malicious attacks on connected vehicles. Initiated with student Mubarek Jedh.

Research grants

1. Measurement of the Reaction of the Brain to Transcranial Magnetic Stimulation: A New Way to Monitor Brain Reactions, College of Engineering, Iowa State University, 2021, $ 16,993

2. Detection of Cyber-Attack on Cars–Proof of concept, Regents Innovation Fund, Iowa State University, 2020, $ 10,000.

3. Controlled Data Dissemination in Suspicious Environments, Air Force Research Lab, Summer Faculty Visit, 2020, $11,700

4. Towards Secure Code Changes, John Deere, 2017-2018, $ 38K

5. Towards Resiliency of Connected Vehicles Against Cyber-attacks, Pacific Northwest National Laboratory, USA, 2017-2018, $ 38K

6. Education Grants for Computer Science, Google, 2017, $ 12K

7. Security Process Analytics, CO-PI, Fraunhofer SIT, funded by SAP, Germany, 2014-2016, $ 150K

8. Dissertation Completion Fellowship, The Graduate College, WMU, USA, 2009

Collaboration on grant proposals

1. Engineering Security and Performance Aware Vehicular Applications for Safer and Smarter Roads, Funded by Qatar Foundation, collaborated with Prof. Bharat Bhargava, Purdue University, 2015-2017, total amount $ 1 M

2. Monitoring-Based System for E2E Security Auditing and Enforcement in Trusted and Untrusted SOA, collaborated with Prof. Bharat Bhargava, funded by Northrup Grumman, USA, 2014-2015, $ 150K

3. End-to-End Security Policy Auditing and Enforcement in Service Oriented Architecture, collaborated with Prof. Bharat Bhargava, funded by Northrup Grumman, USA, 2013-2014, $ 150K

Teaching experience

Iowa State University, USA (2017)
CPRE 562X, Secure Software Engineering (F'20)
SE 339 - Software Architecture and Design (S'17, F'17, S'18, F'18 , S'19, F'19, S'20) 150 students/ semester
SE 329 - Software Project Management (S'17, SS'17, F'17, S'18, SS'18, F'18, S'19, SS'19, F'19, SS'20) 120 students/semester
SE491 - Senior Design I (S'20)
SE 185 - Problem Solving in Software Engineering – Language C(S'17, F'17)
CPRE 490/590/595 - Independent Study (S'17, SS'17, F'17, S'18, SS'18, F'18, S'19, S'20, F'20)

Technical University Darmstadt, Germany (2014-2016)
20-00-0936-vl–Secure Software Development (W'15)
20-00-0777-se–Secure Software Development (W'14)
20-00-0760-se–Tool-based approaches to Software Security (SS'14)

Kalamazoo College, USA (2010-2011)
COMP 486–Software Engineering(W'11)
CS 107–Pictures and Sounds: Programming with Multimedia-Lab (W'11)
COMP 110–Introduction to Programming in Java (F'10, W'11)
COMP 105–Introduction to Computer Science Using the Web - Lab (F'10)

Western Michigan University, USA (2008-2010)
CS2100–Script Programming with Python (S'09, S'10)
CS2100–.Net Framework (F'08)
CS1000–Fluency with Information Technology - Lab (SS'08)
CS1022–Introduction to Math Software - Lab (S'08)
CS5950–Computer Security and Information Assurance - Lab (S'08, F'08)

Publications

Books

1. L. ben Othmane, M. G. Jaatun, and E. Weippl, Eds., *Empirical Research for Software Security: Foundations and Experience*. Taylor & Francis Group, LLC, 2017.

Journal articles

1. L. Ben Othmane, L. Dhulipala, N. Multari, and M. Govindarasu, On the performance of detecting injection of fabricated messages into the can bus, *IEEE Transactions on Dependable and Secure Computing*, 1–1, 2020.

2. R. Ranchal, B. Bhargava, P. Angin, and L. ben Othmane, Epics: A framework for enforcing security policies in composite web services, *IEEE Transactions on Services Computing, Special Issue on Recent Advances in Web Services Research*, **12**, (3), May 2019.

3. L. ben Othmane, G. Chehrazi, E. Bodden, P. Tsalovski, and A. D. Brucker, Time for addressing software security issues: prediction models and impacting factors, *Data Science and Engineering*, **2**, (2), 107–124, Jun. 2017.

4. N. Al-hadhrami, B. Aziz, and L. ben Othmane, An incremental B-model for RBAC-controlled electronic marking system, *International Journal of Secure Software Engineering (IJSSE)*, **7**, (2), 37–64, May 2016.

5. H. Oueslati, M. M. Rahman, L. ben Othmane, and I. G. A. Arbain, Evaluation of the challenges of developing secure software using the agile approach, *International Journal of Secure Software Engineering (IJSSE)*, **7**, (1), Jan. 2016.

6. L. ben Othmane, R. Ranchal, R. Fernando, B. Bhargava, and E. Bodden, Incorporating attacker capabilities in risk estimation and mitigation, *Computers & Security*, **51**, 41–61, Jun. 2015, Elsevier.

7. J. Son, V. Bhuse, L. ben Othmane, and L. Lilien, Incorporating lab experience into computer security courses: Three case studies, *Global Journal of Enterprise Information System (GJEIS)*, **7**, (2), 2015.

8. L. ben Othmane, P. Angin, H. Weffers, and B. Bhargava, Extending the agile development approach to develop acceptably secure software, *IEEE Transactions on Dependable and Secure Computing*, **11**, (6), 497–509, Nov. 2014.

9. L. ben Othmane, R. Fernando, R. Ranchal, B. Bhargava, and E. Bodden, Likelihood of threats to connected vehicles, *International Journal of Next-generation Computing (IJNGC)*, **5**, (3), 290–303, Nov. 2014.

10. L. Lilien, L. ben Othmane, P. Angin, A. DeCarlo, R. Salih, and B. Bhargava, A simulation study of ad hoc networking of UAVs with opportunistic resource utilization networks, *Journal of Network and Computer Applications, special Issue Advanced Technologies for Homeland Defense and Security*, **38**, 3–15. Feb. 2014, Elsevier.

11. L. ben Othmane, H. Weffers, P. Angin, and B. Bhargava, A time-evolution model for the privacy degree of information disseminated in online social networks, *International Journal of Communication Networks and Distributed Systems*, **11**, (4), 412–430, 2013, Inderscience Publishers.

Conference proceeding

1. A. Jamil, L. Ben Othmane, A. Valani, M. Abdelkhalek, and A. Tek, The current practices of changing secure software: An empirical study, in *Proc. the 35th Annual ACM Symposium on Applied Computing*, ser. SAC '20, Brno, Czech Republic, 2020, pp.1566–1575.

2. L. Ben Othmane and M. Lamm, Mindset for software architecture students, in *Proc. IEEE 43rd Annual Computer Software and Applications Conference (COMPSAC)*, vol. 2, Milwaukee, WI, USA, 2019, pp.306–311.

3. L. B. M. Abdelkhalek and A. Jamil, Identification of the impacts of code changes on the security of software, in *2019 IEEE 43rd Annual Computer Software and Applications Conference (COMPSAC)*, Milwaukee, WI, USA, 2019, pp.569–574.

4. V. Mohan, L. ben Othmane, and A. Kres, BP: Security concerns and best practices for the automation of software deployment processes - an industrial case study, in *Proc. IEEE Cybersecurity Development Conference*, Cambridge, MA, Sep. 2018.

5. L. ben Othmane, V. Alvarez, K. Berner, M. Fuhrmann, W. Fuhrmann, A. Guss, and T. Hartsock, Demo: A low-cost fleet monitoring system, in *The Fourth IEEE Annual International Smart Cities Conference*, Kansas City, MO, Sep. 2018.

6. S. Sardesai, D. Ulybyshev, L. ben Othmane, and B. Bhargava, Impacts of security attacks on the effectiveness of collaborative adaptive cruise control mechanism, in *The Fourth IEEE Annual International Smart Cities Conference*, Kansas City, MO, Sep. 2018.

7. D. Ulybyshev, A. Oqab-Alsalem, B. Bhargava, S. Savvides, G. Mani, and L. ben Othmane, Secure data communication in autonomous v2x systems, in *IEEE 2018 International Congress on Internet of Things*, San Francisco, CA, Jul. 2018.

8. B. Pfretzschner and L. ben Othmane, Identification of dependency-based attacks on node.js, in *Proc. of the 12th International Conference on Availability, Reliability and Security (ARES)*, Reggio Calabria, Italy, Sep. 2017.

9. A. Ali and L. ben Othmane, Towards effective security assurance for incremental software development - the case of zen cart application, in *Proc. of the 11th International Conference on Availability, Reliability and Security (ARES)*, Salzburg, Austria, Sep. 2016, pp.564–571.

10. R. Fernando, R. Ranchal, B. An, L. ben Othmane, and B. Bhargava, Consumer oriented privacy preserving access control for electronic health records in the cloud, in *IEEE cloud*, in press (acceptance rate 16,7%), San Francisco, USA, Jun. 2016.

11. V. Mohan and L. B. Othmane, SecDevOps: Is it a marketing buzzword? mapping research on security in devops, in *Proc. of the 11th International Conference on Availability, Reliability and Security (ARES)*, Salzburg, Austria, Sep. 2016, pp.542–547.

12. B. Pfretzschner and L. ben Othmane, Dependency-based attacks on node.js, in *2016 IEEE Cybersecurity Development (SecDev)*, Boston, MA, USA, Nov. 2016, pp.66.

13. L. ben Othmane, T. Cerqueus, A. Thiery, M. Salehie, N. Noel, A. Labaere, R. Domingues, A. Cordier, A. Ventresque, L. Pasquale, P. Perry, and B. Nuseibeh, Response to emergency situations in a traffic management system, in *Proc. of The 2nd World Congress on Computer Applications and Information Systems (WCCAIS'2015)*, Hammamet, Tunisia, Jan. 2015.

14. L. ben Othmane, G. Chehrazi, E. Bodden, P. Tsalovski, A. Brucker, and P. Miseldine, Factors impacting the effort required to fix security vulnerabilities, in *Proc. Information Security Conference (ISC 2015)*, Trondheim, Norway, Sep. 2015, pp.102–119.

15. N. Al-Hadhrami, B. Aziz, S. Sardesai, and L. ben Othmane, Incremental development of RBAC-controlled E-marking system using the b method, in *Proc. of the 10th International Conference on Availability, Reliability and Security (ARES)*, Toulouse, France, Aug. 2015, pp.532–539.

16. H. Oueslati, M. M. Rahman, and L. ben Othmane, Literature review of the challenges of developing secure software using the agile approach, in *Proc. of the 10th International Conference on Availability, Reliability and Security (ARES)*, Toulouse, France, Aug. 2015, pp.540–547.

17. K. Renaud, M. Volkamer, S. Flowerday, and L. ben Othmane, 'I Am Because We Are' developing and nurturing african digital security culture, in *Proc. African Cyber Citizenship Conference 2015 (ACCC 2015)*, Port Elizabeth, South Africa, Nov. 2015.

18. L. T. Lilien, L. ben Othmane, P. Angin, B. Bhargava, R. M. Salih, and A. DeCarlo, Impact of initial target position on performance of uav surveillance using opportunistic resource utilization networks, in *Proc. 33rd IEEE International Symposium on Reliable Distributed Systems Workshops (SRDSW)*, Montreal, Canada, Sep. 2015.

19. L. ben Othmane, P. Angin, and B. Bhargava, Using assurance cases to develop iteratively security features using scrum, in *Proc. of the 9th International Conference on Availability, Reliability and Security (ARES)*, Fribourg, Switzerland, Sep. 2014, pp.490–497.

20. L. ben Othmane, V. Bhuse, and L. Lilien, Incorporating labs into computer security courses, in *Proc. 2013 World Congress on Computer and Information Technology (WCCIT)*, Sousse, Tunisia, Jun. 2013, pp.1–4.

21. L. ben Othmane, H. Weffers, and M. Klabbers, Using attacker capabilities and motivations in estimating security risk, in *Workshop on Risk Perception in IT Security and Privacy*, URL: http://cups.cs.cmu.edu/soups/2013/risk/Cap.-Based-risk.pdf, Newcastle, UK., Jul. 2013.

22. L. ben Othmane, H. Weffers, R. Ranchal, P. Angin, B. Bhargava, and M. M. Mohamad, A case for societal digital security culture, in *Proc. 28th IFIP International Information Security and Privacy Conference (SEC 2013)*, Auckland, New Zealand, Jul. 2013, pp.391–404.

23. L. ben-Othmane, A. Al-Fuqaha, E. ben Hamida, and M. van den Brand, Towards extended safety in connected vehicles, in *Proc. 16th International IEEE Conference on Intelligent Transportation Systems (ITSC)*, The Hague, The Netherlands., Oct. 2013, pp.652–657.

24. B. Bhargava, R. Ranchal, and L. ben Othmane, Secure information sharing in supply chain collaboration, in *Proc. 3rd IEEE International Advance Computing Conference (IACC-2013)*, Ghaziabad, India, Feb. 2013, pp.1636–1640.

25. L. Lilien, M. Elbes, L. ben Othmane, and R. Salih, Simulation of emergency response operations for a static chemical spill within a building using an opportunistic resource utilization network, in *Proc. Of The 13th annual IEEE Conference on Technologies for Homeland Security (HST 13)*, Waltham, USA, Nov. 2013, pp.408–413.

26. M. Azarmi, B. Bhargava, P. Angin, R. Ranchal, N. Ahmed, A. Sinclair, M. Linderman, and L. ben Othmane, An end-to-end security auditing approach for service oriented architectures, in *Proc. 31st IEEE International Symposium on Reliable Distributed Systems (SRDS 2012)*, Irvine, CA, Oct. 2012, pp.279–284.

27. R. M. Salih, L. Lilien, and L. ben Othmane, Protecting patients electronic health records using enhanced active bundles, in *Proc. 6th International Conference on Pervasive Computing Technologies for Healthcare, Doctoral Consortium*, San Diego, CA, May 2012, pp.1–4.

28. R. Salih, L. ben Othmane, and L. Lilien, Privacy protection in pervasive healthcare monitoring systems with active bundles, in *Proc. Ninth IEEE International Symposium on Parallel and Distributed Processing with Applications Workshops (ISPAW 2011)*, Busan, Korea, May 2011, pp.311–315.

29. P. Angin, B. Bhargava, R. Ranchal, N. Singh, M. Linderman, L. ben Othmane, and L. Lilien, An entity-centric approach for privacy and identity management in cloud computing, in *Proc. 29th International Symposium on Reliable Distributed Systems (SRDS 2010)*, New Delhi, India, Nov. 2010, pp.177–183.

30. L. Lilien, A. Al-Alawneh, and L. ben Othmane, The pervasive trust foundation for security in next generation networks (a position paper), in *Proc. The New Security Paradigms Workshop (NSPW 2010)*, Concord, Massachusetts, Sep. 2010, pp.129–142.

31. R. Ranchal, B. Bhargava, L. ben Othmane, L. Lilien, A. Kim, M. Kang, and M. Linderman, Protection of identity information in cloud computing without trusted third party, in *Proc. 29th International Symposium on Reliable Distributed Systems (SRDS 2010)*, New Delhi, India, Nov. 2010, pp.368–372.

32. L. ben Othmane and L. Lilien, Protecting privacy of sensitive data dissemination using active bundles, in *World Congress on Privacy, Security, Trust and the Management of e-Business (CONGRESS '09)*, Aug. 2009, pp.202–213.

33. ——, Protecting sensitive data throughout its life cycle, in *Graduate Students Symposium, Annual Conference on Privacy Security and Trust*, Fredericton, Canada, Oct. 2008.

Book chapters

1. D. S. Cruzes and L. ben Othmane, "Empirical research for software security: foundations and experience," in, L. ben Othmane, M. G. Jaatun, and E. Weippl, Eds. Taylor & Francis Group, LLC, 2017, ch. Threats to Validity in Software Security Empirical Research, pp. 275–300.

2. L. ben Othmane, A. D. Brucker, S. Dashevskyi, and P. Tsalovski, "Empirical research for software security: foundations and experience," in, L. ben Othmane, M. G. Jaatun, and E. Weippl, Eds. Taylor & Francis Group, LLC, 2017, ch. Data Analytics for Software Security: Foundations and Experience, pp. 69–94.

3. L. ben Othmane, H. Weffers, M. M. Mohamad, and M. Wolf, "Wireless sensor networks (WSN) for vehicular and space applications: Architecture and implementation," in, D. BenHaddou and A. Al-Fuqaha, Eds. Norwell, MA: Springer, 2015, ch. A Survey of Security and Privacy in Connected Vehicles, pp. 217–247.

PhD thesis

1. L. ben Othmane, "Active bundles for protecting confidentiality of sensitive data throughout their lifecycle," PhD thesis, Western Michigan University, Kalamazoo, MI, USA, Dec. 2010.

Talks and (Invited) lectures

1. The 6th International Conference on Software Security and Assurance (ICSSA 2020), Altoona, PA, 2020 (invited keynotes)

2. On the security of connected vehicles , The 14th International Conference on Risks and Security of Internet and Systems, Hammamet, Tunisia, 2019 (Keynotes)

3. Security Concerns and Best Practices for SecDevOps, DevSecOpsDays, Istanbul, Turkey, 2019

4. Secure Code Changes, 2018 Annual Computer Security Applications Conference, San Juan, Puerto Rico, USA, 2018.

5. Security Concerns and Best Practices for SecDevOps, 12th Central Area Networking and Security Workshop, Manhattan, USA, 2018.

6. What Will It Take to Develop Secure Software? Midwest Security Workshop, Urbana, April 14, 2018

7. Teaching Software Architecture Process to Undergraduate Students: A Case Study, International Workshop on Engineering IoT systems: Architectures, Services, Applications, and Platforms, Seattle, USA, 2018.

8. What Will It Take to Develop Secure Software? Midwest Security Workshop, Urbana, USA, 2018.

9. On the Limit of Security Protection Mechanisms, Iowa State University Research Day, USA, 2018.

10. Identification of Dependency-based Attacks on Node.js, Montclair State University, USA, 2018.

11. What Roles Can Empirical Research Play to Advance Software Security Knowledge? Purdue University, USA, 2018.

12. Identification of Dependency-based Attacks on Node.js, 11th Central Area Networking and Security Workshop, Rolla, MO, USA, 2017.

13. What Roles Can Empirical Research Play to Advance Software Security Knowledge? University of Oslo, Norway, 2017.

14. What Will It Take to Develop Secure Software? SINTEF, Norway, Dec. 2016.

15. What Will It Take to Develop Secure Software? Ivoire Cybersecurity conference, Nov. 2016.

16. Reflection on the Learner-Centric Education Approach, Iowa State University, USA,(online) 2016.

17. Likelihood of Threats to Connected Vehicles, Robert Bosch GmbH, Renningen, Germany, 2016.

18. Time for Addressing Software Security Issues: Prediction Models and Impacting Factors, OWASP AppSec Europe, Rome, Italy 2016.

19. Security Code Analysis of Truecrypt, Workshop "Softwarequalitat Sichtbar Machen," Leipzig, Germany, 2016

20. Empirical Research Methods for Secure Software Engineering, International Cyber Security Workshop and Certificate Program, Istanbul, Turkey, 2016.

21. Empirical Research Methods for Secure Software Development, Ninth International Crisis Management Workshop (CriM'15) and Oulu Winter School, Oulu, Finland, 2015.

22. Estimating Vulnerabilities Fixing Time, Cast Workshop hot topic "Big Data Security," Darmstadt, Germany, 2015.

23. Estimating Effort to fix Vulnerabilities at SAP, Workshop Recent Advances in Secure Software Engineering, Alghero, Italy, 2015.

24. An Example of the Science for Secure Software Development - Attacker-Capability-Based Risk Estimation, SINTEF, Trondheim, Norway, 2015.

25. Incorporating Attacker Capabilities in Risk Estimation and Mitigation, Purdue University, West Lafayette, IN, USA, 2014.

26. Three Examples of Cyber-physical Systems, Summer School on Cyber-Physical Systems, Grenoble, France, 2014.

27. Extending the Agile Development Life-cycle to Develop Secure Software, Fraunhofer Secure Information Technology, Darmstadt, Germany, 2013.

28. Extending the Agile Development Life-cycle to Develop Secure Software, Lero-The Irish Software Research Center, Limerick, Ireland, 2013.

29. Digital Security Culture for Organizations and the Society, Workshop Information Technology Security for Public Institutions, Hannover, Germany, 2013.

30. Towards Self-protecting Data, Interdisciplinary Centre for Security, Reliability and Trust, University of Luxembourg, Luxembourg, 2012.

31. Protecting Privacy in Sensitive Data Dissemination with Active Bundles, Purdue University, West Lafayette, IN, USA, 2010.

Open-Source from Senior Design Projects

1. Security Assurance Case Design Tool, 2017. (Available in Github)

2. DevOps for Javascript-based Microservices, 2017-2018. (Available in Github)

3. Fleet Monitoring System, 2017-2018. (Available in Github)

Research Students

Current Ph.D. Students

1. Ameerah-Muhsinah Jamil (PhD)

Alumni students

1. Mubarek Jedh (Msc), Using Messages Precedence Similarity to Detect Message Injection in In-vehicle Network, Iowa State University, 2020.

2. Nick Schmidt (Msc), Control of physical objects utilizing brain computer interfaces, Iowa State University, 2020.

3. Shifa Khan (MSc), Automated threat modeling for autonomous vehicle software - Apollo Auto, Iowa State University, 2019.

4. Sudharrshan Veeraraghavaramannijanaar (Msc), Security analysis of vehicle to vehicle Arada Locomate on board unit, Iowa State University, 2018.

5. Srilalithadaksh Dhulipala (Msc), Detection of injection attacks on in-vehicle network using data analytics, Iowa State University, 2018.

6. Prachi-Rajesh Patel (Msc), Existence of dependency-based attacks in Node.JS environment, Iowa State University, 2018.

7. Brian Pfretzschner (Msc), Detection of dependency-based attacks on NodeJS environment, TU Darmstadt, 2016 (in collaboration with IBM Germany)

8. Daniel Magin (Msc), Side-channel analysis of ABAP, TU Darmstadt, 2016 (in collaboration with HP Germany)

9. Azmat Ali (Msc), Automated threat extraction from recovered architecture - the case of universAAL-based lighting example, TU Darmstadt, 2016

10. Vaishnavi Mohan (Msc), Transformation of a waterfall-oriented manual code deployment process to secure DevOps, TU Darmstadt, 2016 (in collaboration with IBM Germany)

11. Martin Mory (Msc), Evaluating the precision of malware in detecting analysis environments, TU Darmstadt, 2016 (in collaboration with HP Germany)

12. Shantanu Sardesai (Msc), Impacts of security attacks on the effectiveness of collaborative adaptive cruise control system, TU Darmstadt, 2015

Ph.D. examination : Abdullah Ayed Algarni (QUT, Australia, 2016).
Past Ph.D. student collaborations: Pelin Angin (Purdue Univ., USA, Graduated 2014), Ruchith Fernando (Purdue Univ., USA, Graduated 2014), Rohit Ranchal (Purdue Univ., USA, Graduated 2015), Raed Salih (WMU, USA)
Past Internships: Pritam Dash (India)

Awards and Honors

2011 All-University Graduate Research and Creative Scholar Award, The Graduate College, Western Michigan University (WMU)
2010 Department Teaching Effectiveness Award, Department of Computer Science, WMU
2010 Department Graduate Research and Creative Scholar Award, Department of Computer Science, WMU
2010 Doctoral Excellence in Research Award, Department of Computer Science, WMU
2009 Department Teaching Effectiveness Award, The Graduate College, WMU
2009 Department Graduate Research and Creative Scholar Award, The Graduate College, WMU
2009 Outstanding Service Award, Department of Computer Science, WMU
2008 Best Student Paper Award, Graduate Student Symposium, Sixth Annual Conference on Privacy, Security and Trust (PST2008), Fredericton, New Brunswick, Canada

Professional Activities

Grant review

1. Member of the proposals review panel for the NSF Secure and Trustworthy Cyberspace (SATC) program, 2018.

2. Advisory Board member for the EU project RASEN (Compositional Risk Assessment and Security Testing of Networked Systems), June 2015.

Programs development and assessment

1. Contributor to the online MS in Cybersecurity, University Wisconsin System, Extended Campus, USA, 2020.

2. External Assessor for the MSc in Cyber Security Analytics program, University of Exeter, UK. 2020.

Department Services

1. Senior Design Committee (2019-)

2. Faculty of the Software Engineering Program (2017-)

3. Member of the ISU Big Data Brain initiative (2019-)

4. Member of the Information Assurance Center (2017-)

5. Member of the Infrastructure Planning and Development Committee (2017-)

6. Member of the Software Engineering Strategic Planning Committee (2018-2019)

7. Member of the Software Engineering Petition Committee (2017/2020)

Journals editing

1. Journal of Automotive Software Engineering, Editorial board, Atlantis Press, 2018-present. associate editor.

2. Special issue of Journal of Information Security and Applications, Elsevier, 2020, guest editor.

3. Special issue of the EURASIP Journal on Information Security, Springer, 2019, guest editor.

4. Special issue the journal Computers & Security, Elsevier, 2019, guest editor.

5. Special issue of the International Journal of Secure Software Engineering (IJSSE), IGI-group, Jan./Feb. 2016, Guest Co-editor.

6. The Hilltop Review–A Journal of Western Michigan University Graduate Research, published by the Graduate Student Advisory Committee (GSAC), WMU, 2009-2010, Editor-in-chief

Event Organization

1. The 13th Central Area Networking and Security Workshop (CANSec), Iowa State University, Ames, IA, 2019, Co-organizer.

Conference Steering Committee

1. The 13th Central Area Networking and Security Workshop (CANSec), Iowa State University, Ames, IA, 2019, Co-organizer.

2. The IEEE International Conference on Software Quality, Reliability and Security, 2021.

Event Chair

1. Central Area Networking and Security Workshop (CANSec), Ames, IA, 2019, Co-chair

2. Fifth International Workshop on Secure Software Engineering (SSE' 19), Canterbury, UK, 2019, Co-chair.

3. Fourth International Workshop on Secure Software Engineering (SSE' 18), Hamburg, Germany, 2018, Co-chair.

4. Third International Workshop on Secure Software Engineering (SSE' 18), Hamburg, Germany, 2018, Co-chair.

5. Third International Workshop on Secure Software Engineering (SSE' 17), Reggio Calabria, Italy, 2017, Co-chair.

6. Workshop on Empirical Research Methods in Information Security, Montreal, Canada, 2016, Co-chair.

7. Second International Workshop on Agile Secure Software Development (ASSD' 16), Salzburg, Austria, 2016, Co-chair.

8. First International Workshop on Agile Secure Software Development (ASSD' 15), Toulouse, France, 2015, Co-chair.

9. Summer School on Cyber-Physical Systems, Grenoble, France, 2014, chair of a session.

10. World Congress on Computer and Information Technology (WCCIT), Sousse, Tunisia, 2013, chair of a session.

11. Workshop Information Technology Security for Public Institutions, Eindhoven, Netherlands, 2013, chair of a session.

Panel Member

1. Software Drives – Automotive Development 2030, Stuttgart, Germany, Sep. 2014.

Conference/Workshop Program Committee Member (Partial list)

1. IEEE COMPSAC Symposium on Security, Privacy and Trust in Computing (SEPT), Madrid, Spain, 2020

2. IEEE Security Development Conference (SecDev), Atlanta, GA, 2020.

3. The IEEE International Workshop on Security, Trust, and Privacy for Software Applications, Madrid, Spain, 2020

4. The 2020 IEEE 91st Vehicular Technology Conference: VTC2020-Spring, Antwerp, Belgium, 2020

5. IEEE International Smart Cities Conference (ISC2), Casablanca Morocco, 2019.

6. Data Driven Intelligence for a Smarter World (COMPSAC), Milwaukee, USA, 2019.

7. The International Conference on Software Security and Assurance, Austria, 2019.

8. The 13th IEEE International Workshop on Security, Trust, and Privacy for Software Applications, Milwaukee, USA, 2019.

9. Wireless Days, Manchster, UK, 2019.

10. The International Conference on Software Security and Assurance, Seoul, South Korea, 2018.

11. IEEE 88th Vehicular Technology Conference, Chicago, IL, 2018.

12. IEEE International Smart Cities Conference (ISC2), Kansas City, MO, 2018.

13. IEEE Security Development Conference (SecDev), Boston, MA, 2018.

14. The 13th IEEE International Workshop on Security, Trust, and Privacy for Software Applications, Tokyo, Japan, 2018.

15. IEEE International Multidisciplinary Conference on Engineering Technology (IMCET), Beirut Lebanon, 2018.

16. The 17th IEEE International Conference on Computer and Information Technology (IEEE CIT-2017), Helsinki, Finland, Aug. 2017.

17. The 25th Euromicro International Conference on Parallel, Distributed, and Network-Based Processing, St. Petersburg, Russia, Mar. 2017.

18. The 15th IEEE International Conference on Machine Learning and Applications, Anaheim, USA, Dec. 2016.

19. Workshop Challenges in Information Security and Privacy Management (ARES-ISMP 2016), Salzburg, Austria, 2016.

20. 17th IEEE International Conference on Mobile Data Management (MDM'16), Porto, Portugal, 2016.

21. The 15th Int. Conf. on Computer and Information Technology (CIT-2015), Liverpool, UK, 2015

22. The 2nd Int. Conf. on Safety and Security in Internet of Things (SaSeIoT 2015), Rome, Italy, 2015

23. The 18th Int. Conf. on Computational Science and Engineering (CSE), Porto, Portugal, 2015

24. Int. Conf. on Innovations in Information Technology (IIT'15), UAE, 2015

25. Symposium on Reliable Distributed Systems (SRDS 2015), Montreal, Canada, 2015

26. Int. workshop on Mobile Computing Security (MCS), Berlin, Germany, 2015.

27. The 17th Int. Conf. Computational Science and Engineering (CSE 2014), Chengdu, China, 2014

28. The Int. Conf. on Advanced Computing, Networking and Security (ADCONS 2013), Surathkal, India, 2013

29. Workshop on Cloud Computing Issues and Trends, London, UK, October 7-9, 2013

30. The 5th Int. Conf. on Computational Aspects of Social Networks (CASoN 2013), Fargo, USA, 2013

31. The 3rd Int. Conf. on Communications and Information Technology (ICCIT 2013), Beirut, Lebanon, 2013

32. The 4th Int. Conf. on Computational Aspects of Social Networks (CASoN 2012), Sao Carlos, Brazil, 2012

33. The 5th Int. Conf. on Advanced Engineering Computing and Applications in Sciences (ADV-COMP 2011), Lisbon, Portugal, 2011

34. The 4th Int. Conf. on Advances in Mesh Networks (MESH 2011), French Riviera, France, 2011

35. The 30th IEEE Symposium on Reliable Distributed Systems (SRDS 2011), Madrid, Spain, 2011

36. The 3rd International Workshop on Specialized Ad Hoc Networks and Systems (SAHNS 2011), Minneapolis, USA, 2011

37. The 3rd Int. Conf. on Computational Aspects of Social Networks (CASoN 2011), Salamanca, Spain, 2011

38. The 9th Int. Conf. on Privacy, Security and Trust (PST 2011), Montreal, Quebec, Canada, 2011

Reviewer of journals (Partial list)

1. Computers & Security, Elsevier, 2014, 2015, 2016, 2017, 2018, 2019, 2020

2. IEEE Internet of Things Journal, IEEE, 2018, 2019, 2020

3. Arabian Journal for Science and Engineering (AJSE), Elsevier, 2018, 2019, 2020

4. IEEE Transactions on Network and Service Management, 2017, 2020

5. Computational and Structural Biotechnology Journal, Elsevier, 2018, 2019

6. IEEE Transactions on Dependable and Secure Computing, IEEE, 2016, 2017, 2019

7. SAE International Journal of Passenger Cars: Electronic and Electrical Systems, 2019

8. Computer Communications, Elsevier, 2018

9. IEEE Software, IEEE, 2017

10. IEEE Transactions on Dependable and Secure Computing, IEEE, 2016, 2017

11. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, IEEE, 2017

12. IEEE Transactions on Services Computing, IEEE 2015

13. Journal of Computer Security, IOS Press, 2015

14. Software: Practice and Experience, Wiley, 2015

15. IBM Journal of Research and Development, 2015

16. Security and Communication Networks (SCN), John Wiley, 2010, 2011, 2012, 2013, 2014

17. Journal of Network and Computer Applications, Elsevier, 2012, 2013, 2014

18. Ad Hoc Networks, Elsevier, 2014

19. IEEE Systems Journal, IEEE, 2014

20. Computers & Electrical Engineering, Elsevier, 2014

21. Mobile Networks and Applications, Springer, 2013

22. Telecommunication Systems, Springer, 2013

23. Transactions on Information Forensics & Security, IEEE, 2011

24. Information Sciences, Elsevier, 2010, 2011, 2012

25. Transactions on Computational Science, Springer, 2010

26. Information Systems Frontiers (ISF), Springer, 2010

27. Journal of Systems and Software, Elsevier, 2010