MOHAMMED I. AL-SALEH

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EDUCATION

Ph.D., 2011
University of New Mexico, USA
Details:
- ***Dissertation Title***: "Fine-grained reasoning about the security and usability trade-off in modern security tools"
- ***Major***: Computer Science
- ***GPA***: **4.03**/4.0

M.Sc., 2007
New Mexico State University, USA
Details:
- **Thesis Title**: "Software support for threaded runtime monitoring"
- ***Major***: Computer Science
- ***GPA***: **4.0**/4.0

B.Sc., 2003
Jordan University of Science and Technology, Jordan
Details:
- ***Major***: Computer Science
- ***GPA***: **88.0**/100
- ***Rank***: 1st among the students graduated with me.

AWARDS

- In 2003, I got a fully-supported scholarship from Jordan University of Science and Technology to get M.Sc. and Ph.D. degrees from the USA.

JOB EXPERIENCE

Associate Professor: 2016 - present
Jordan University of Science and Technology
Assistant Professor: 2011 - 2016
Jordan University of Science and Technology
Teaching Assistant: 2009- 2010
University of New Mexico
Research Assistant: 2008- 2011
University of New Mexico
Teaching Assistant: 2006- 2007
New Mexico State University
Research Assistant: 2006- 2007
New Mexico State University
Teaching Assistant: 2003-2005
Jordan University of Science and Technology

RESEARCH INTERESTS
- Information security
- Network security
- Dynamic information flow tracking
- Digital forensics
- Antivirus analysis
- Operating systems security
- Malware analysis

- Intrusion detection
- Web security

OTHER CERTIFICATES

- I am a CISCO Certified Network Associate (CCNA) ITQ (Instructor Trainer Qualification) certified (ToT).
- I am a CISCO certified CCNA Security Cyber Operations Instructor Trainer (ToT).

COURSES I TAUGHT

- Advanced Operating Systems   (Graduate Level)
- Computer Security   (Graduate Level)
- Network Security   (Undergraduate Level)
- Operating Systems   (Undergraduate Level)
- Computer Networks   (Undergraduate Level)
- Computation Theory   (Undergraduate Level)
- Data Structures & Algorithms   (Undergraduate Level)
- Basics in Computer   (Undergraduate Level)

MASTER'S STUDENTS GRADAUTD UNDER MY SUPERVISION

- Yahya A. Forihat. "Towards Evidence Acquisition of Android Devices in Mobile Phone Forensics" (12/2012)

- Fatima M.AbuHjeela. "Bypassing the Antivirus On-Access Scanner's Thresholds" (05/2013)

- Atta Al-Khaleel. "Carving and Clustering Documents in Portable Document Format for Digital Forensics" (08/2015)

- Mona Kamal Jamil Al-Shamaileh. "Investigating User Deleted Accounts for Digital Forensics" (11/2015)

- Hanan M. Hamdan. "Precise performance characterization of the Antivirus on the file system operations" (01/2016)

- Rasha K. Al-Huthaifi. "Improving Antivirus Scanning Engines: Memory On-Access Scanner" (12/2016)

- Ethar A. Qawasmeh. "A Memory Forensic Framework For Applications". (07/2019).

- Mohammad S. Alzyout. "ARIMA-Based Dynamic Vehicle Location Prediction For Dsrc-Based V2v Communication Systems". (08/2019)

A COMMITTEE MEMBER FOR THE FOLLOWING MASTER'S STUDENTS

- Hail A. Albashiri. "Collaborative Recommendation System Improvement Using Multi Attribute Decision Making Method" (11/2012)

- Ahmad A. Al-Dahoud. "Autonomic Cloud Computing Resources Scaling" (05/2013)

- Dua'a Bani-Salameh. "Toward a cost-effective scheduling scheme in smart grids Data" (12, 2014)

- Bushra M. Al-Hasan. "Integrated Indoor Navigation Techniques to Allow Blind and Visually Impaired People to Reach a Precise Object" (01/2015)

- Duaa M. Ekhtoom. Best-Compression Neighbor Technique To Analyze Metamorphic Viruses. (09/2016)

- Esraa Hussein Alshammari. A New Technique for File Carving on Hadoop Ecosystem. (05/2018)

A REVIEWER/TPC MEMBER
- The International Conference on Information and Communication Systems (ICICS)
- IET Information Security

- Journal of King Saud University - Computer and Information Sciences
- Simulation Modeling Practice and Theory
- International journal of electronic security and digital forensics
- International journal of information security

PUBLICATIONS

JOURNAL ARTICLES

- **Al-Saleh, Mohammed I.,** and Hanan M. Hamdan. *"Precise Performance Characterization of Antivirus on the File System Operations". Journal of Universal Computer Science.   vol. 25, no. 9 (**2019**), 1089-1108.*

- *Z.A. Al-Sharif, **M.I. Al-Saleh**, Y. Jararweh, L. Alawneh, A.S. Shatnawi   "Precise Performance Characterization of Antivirus on the File System Operations". Journal of Universal Computer Science.   vol. 25, no. 9 (**2019**), 1174-1198.*

- **Al-Saleh, Mohammed I.,** and Yaser Jararweh. *"Fingerprinting Violating Machines with In-Memory Protocol Artifacts." International Journal of Advanced Intelligence Paradigms. (To apprear **2019**)*

- *Al-Sharif, Ziad A., **Mohammed I. Al-Saleh**, Luay M. Alawneh, Yaser I. Jararweh, and Brij Gupta. "Live forensics of software attacks on cyber physical systems." Future Generation Computer Systems (**2018**).*

- *Ziad A. Al-Sharif, Attaa Y. Al-Khalee, **Mohammed I. Al-Saleh**, and Mahmoud Al-Ayyoub. "Carving And Clustering Files In Ram For Memory Forensics". Far East Journal of Electronics and Communications. Volume 18, Issue 5, Pages 695 – 722 (**2018**).*

- *Abu Doush, Iyad, and **Mohammed I. Al-Saleh**. "Can genetic algorithms help virus writers reshape their creations and avoid detection?." Journal of Experimental & Theoretical Artificial Intelligence (**2017**): 1-14.*

- *Alsmirat, Mohammad A., Islam Obaidat, Yaser Jararweh, and **Mohammed Al-Saleh.** "A security framework for cloud-based video surveillance system." Multimedia Tools and Applications (**2017**): 1-16.*

- ***Al-Saleh, Mohammed I.***, *and Rasha K. Al-Huthaifi. "On Improving Antivirus Scanning Engines: Memory On-Access Scanner." Journal of Computer Science. 13 (8), pp. 290-300. (**2017**)*

- ***Al-Saleh, Mohammed I.***, *and Mona Al-Shamaileh. "Forensic Artifacts Associated with Intentionally Deleted User Accounts." International Journal of Electronic Security and Digital Forensics. 9.2 (**2017**): 167-179.*

- ***Al-Saleh, Mohammed I.*** *and Bilal Shebaro."Enhancing Malware Detection: Clients Deserve More Protection. "International Journal of Electronic Security and Digital Forensics 8.1 (**2016**): 1-16.*

- ***Al-Saleh, Mohammed I.***, *Fatima M. AbuHjeela, and Ziad A. Al-Sharif. "Investigating the detection capabilities of antiviruses under concurrent attacks." International Journal of Information Security 14.4 (**2015**): 387-396.*

- ***Al-Saleh, Mohammed Ibrahim***, *Antonio M. Espinoza, and Jedediah R. Crandall. "Antivirus performance characterisation: system-wide view." IET Information Security 7.2 (**2013**): 126-133.*

- ***Al-Saleh, Mohammed I.***, *"The impact of the antivirus on the digital evidence."International Journal of Electronic Security and Digital Forensics 5.3-4 (**2013**): 229-240.*

- ***Al-Saleh, Mohammed I.***, *and Yahya A. Forihat. "Skype forensics in android devices." International Journal of Computer Applications 78.7 (**2013**): 38-44.*

- ***Al-Saleh, Mohammed I.***, *and Ziad A. Al-Sharif. "Utilizing data lifetime of TCP buffers in digital forensics: Empirical study." Digital Investigation 9.2 (**2012**): 119-124.*

CONFERENCE ARTICLES

- ***Al-Saleh, Mohammed I.***, *and Jedidiah R. Crandall. "On information flow for intrusion detection: What if accurate full-system dynamic information flow tracking was possible?" Proceedings of the 2010 workshop on New security paradigms. ACM, **2010**.*

- ***Al-Saleh, Mohammed I.,*** *and Jedidiah R. Crandall. "Application-level reconnaissance: Timing channel attacks against antivirus software." 4th USENIX Workshop on Large-Scale Exploits and Emergent Threats (LEET).* ***2011****.*

- ***Al-Saleh, Mohammed I.,*** *Patrick Bridges, and Jedidiah R. Crandall. Architectural Support for Securing Sensor Networks against Remote Attacks. ISCA First International Conference on Sensor Networks and Applications (SNA-2009). San Francisco, CA. November* ***2009****.*

- ***Al-Saleh, Mohammed I****. and Ziad Al-Sharif. "Ram forensics against cyber crimes involving files." The Second International Conference on Cyber Security, Cyber Peacefare and Digital Forensic (CyberSec2013). The Society of Digital Information and Wireless Communication,* ***2013****.*

- *Al-Khaleel, Atta, Duaa Bani-Salameh, and* ***Mohammed I. Al-Saleh****. "On the Memory Artifacts of the Tor Browser Bundle." The International Conference on Computing Technology and Information Management (ICCTIM2014). The Society of Digital Information and Wireless Communication,* ***2014****.*

- ***Al-Saleh, Mohammed I.*** *"Towards Extending the Antivirus Capability to Scan Network Traffic." The International Technology Management Conference (ITMC2015).* ***2015****.*

- *Al-Sharif, Al-Sharif A., Dana N. Odeh, and* ***Mohammad I. Al-Saleh****" Towards Carving PDF Files in the Main Memory." The International Technology Management Conference (ITMC2015).* ***2015****.*

- ***Al-Saleh, Mohammed I.*** *"Fingerprinting Violating Machines With TCP Timestamps." The Third International Conference on Digital Security and Forensics (DigitalSec****2016****).*

- *Balhaf, Khaled, Mohammed A. Shehab, T. Wala'a, Mahmoud Al-Ayyoub,* ***Mohammed Al-Saleh****, and Yaser Jararweh. "Using GPUs to speed-up Levenshtein edit distance computation." In 2016 7th International Conference on Information and Communication Systems (ICICS), pp. 80-84.* ***IEEE, 2016****.*

- *Duaa Ekhtoom, Mahmoud Al-Ayyoub, **Mohammed I. Al-Saleh**, and Ismail Hmeidi. "A Compression-Based Technique to Classify Metamorphic Malware." 13th ACS/**IEEE** International Conference on Computer Systems and Applications (AICCSA **2016**).*

- ***Al-Saleh, Mohammed I.**, and Rasha K. Al-Huthaifi. "Towards Providing Memory On-Access Scanners." The Fourth International Conference on Computer Science, Computer Engineering, and Education Technologies. Lebanon April 26-28, **2017**.*

- *Ahmad Ababneh, Mohammad Abu Awwad, and **Mohammed I. Al-Saleh**. "IMO Forensics in Android and Windows Systems." **IEEE** IISA 2017, Cyprus, 28-30 August 2017.*

- *Ziad Al-Sharif, **Mohammad I. Al-Saleh** and Luay Alawneh, "Towards the Memory Forensics of OOP Execution Behavior." **IEEE** IISA **2017**, Cyprus, 28-30 August 2017.*

- ***Mohammed I. Al-Saleh** and Hanan M. Hamdan. On Studying the Antivirus Behavior on Kernel Activities. 2018 **ACM** 7th International Conference on Frontiers of Information Technology (ICFIT 2018). Paris, France.*

- ***Mohammed I Al-Saleh**, Mohammad A Alsmirat, Yaser Jararweh, Islam Obaidat. "A Unified Key Distribution and Session Management Protocol for Mobile Video Surveillance Systems". **2018 IEEE** Fifth International Conference on Internet of Things: Systems, Management and Security.*

- ***Mohammed I Al-Saleh**, Ziad A Al-Sharif, Luay Alawneh. "Network Reconnaissance Investigation: A Memory Forensics Approach". **2019** IEEE 10th International Conference on Information and Communication Systems (ICICS).*

ONGOING PROJECTS

- Utilizing GPU in speeding up computer forensics tools.

OTHER ACADEMIC ACTIVITIES AND HIGHLIGHTS

- I participated in the Regional Cyber Security Day 2015 organized by **Center for Interdisciplinary Studies in Security and Privacy (CRISSP-AD) and hosted by New York University Abu Dhabi (NYUAD).** In the meeting, we explored enhancing collaboration between security researchers in the region and funding options.

- Among others, my paper *"Enhancing Malware Detection: Clients Deserve More Protection" was selected by the publishers to be on their science spot:* (http://sciencespot.co.uk/low-cost-malware-detection.html*). It was also reported by several news websites such as (**last accessed on 06-Jan-16**):*

  - http://www.sciencedaily.com/releases/2015/12/151207114003.htm

  - http://phys.org/news/2015-12-malware-loophole.html

  - http://www.homelandsecuritynewswire.com/dr20151208-lowcost-malware-detection