Moutaz Alazab, PhD

● **M:** + 962 799 541900   ● **Skype:** azab_moutaz   ● **Email:** m.alazab@bau.edu.jo
● **Department**: Intelligence Systems   ●**Faculty**: Faculty of Artificial Intelligence, BAU

PROFILE

- I am a computer security expert with the focus on CyberSecurity, Artificial Intelligence, Digital Forensic, Malware Analysis, Security Penetration Testing.
- I am experienced in Information Security Policies and Procedures development.
- More than 10 years of professional experience in computer science and engineering area.
- I have published more than 20 peer-reviewed articles in well-known, high-quality international journals and conferences. These articles —which include most recent publication, '*Crime in Cyberspace*'—have been widely cited.
- Teaching Cyber security courses.

EDUCATION

-**PhD.** School of Information Technology, Faculty of Science, Engineering and Built Environment at Deakin University, Victoria, Australia, April 2011 – August 2014.
Thesis Title: "Analysis on Smartphone Devices for Detection and Prevention of Malware"
-**BEng.** Department of Electrical & Computer Engineering, Faculty of Engineering, Al-Balqa Applied University, Amman – Jordan, October 2005 - August 2009.
Thesis Title: "Designing and Implementing an Intelligent Wireless-Enabled Robot Car"
-**High School**, Scientific Stream, Al-Salt Secondary School, Amman – Jordan, September 2004 - June 2005.

RESEARCH PROJECTS & GRANTS

-**January 2017** recipient of *Research Incentive Fund (RIF) Grant, Zayed Cluster Fund, Research Cluster Award # R17079, 329,200 AED*, United Arab Emirate. I have been working on a research project entitled "*A Multilayer Framework for Assurance and Networking Secure*". This project focuses on the following areas: websites security, sentiment analysis, authorship attribution, honeynets and Zero-day-attacks attacks.

-**April 2011 – December 2014** working in *Network and System Security Laboratory (NSCLab)* which is dedicated to network and system security research at Deakin University, Australia. The primary goal of our work was to provide solutions to the security, privacy, reliability, trust, and performance problems of complex network and system environments.

- **April 2011 – December 2014** working in *Securing Cyberspace Research Laboratory*. This research lab works in the areas of Critical Infrastructure Protection, Data and Information Security and Privacy, Security and the Internet, and Digital Forensics in Australia. The mission of the lab was to: expand the research base in information security and privacy and train students in this area.

-**April 2011 – December 2014** working on project entitled "*Mathematical Methods for Medical Related Research*" in Australia.

-**July 2012 – September 2012** working on project entitled "*Protecting Smartphones from Malware*" at the UniSA, Australia. The project was funded by Stratsec that is a BAE Systems company and is Australia's largest and most successful cyber security consulting firm with considerable expertise in the public and private sector.

EXPERIENCE

Sep 2019- Date BAU, Al-Salt, Jordan.
- Assistant Professor in the department of Cybersecurity - Faculty of Artificial intelligence.
- I am teaching the following subjects for undergraduate students:
  - Networks Security Monitoring and Documenting.
  - Networks Security.
  - Penetration Testing.
  - Protocols of Information Security & Networks.
  - Risk Managements for Information Security.
- Designing core and elective grad-level security courses.
- Developing these new courses on computer security, focusing on defences for real-world attacks and security.
- Conducting research in the area of cybersecurity and Artificial Intelligence.

Aug 2017- Aug 2019 CCQ, Doha, Qatar.
- Assistant Professor/Lecturer - I am teaching the following subjects for undergraduate students:
  - Advanced Networking (ITEC 3350).
  - Computing Fundamentals (ITEC 1300).
  - Cybercrime (ITCS 10377).
  - Firewall and VPN (ITEC 2330)
  - Fundamentals of Network (ITEC 1320).
  - Information Systems Forensics and Investigations (ITCS 3350).
  - Introduction to Malware Analysis (ITCS 4485).
  - Intrusion Detection & Prevention (ITCS 3430).
  - Network OS & Server Administration (ITEC 1420).
  - Network Security Architecture (ITCS 3320).
- For the first time in the college, we established the new department of cyber security for undergraduate students.
- Designing core and elective grad-level security courses. The developed courses are as follows: (ITCS 3320 Network Security Architecture), (ITCS 3350 Information Systems Forensics and Investigations), (ITCS 4340 Information Security Auditing), (ITCS 3430 Intrusion Detection & Prevention), (ITCS 4310 Introduction to Cryptography), (ITCS 4315 Mobile Device Security), (ITCS 4350 Network Threats and Risk Assessment), (ITCS 4420 Ethical Hacking), (ITCS 4485 Introduction to Malware Analysis) and (ITEC 4310: Information Technology National Laws and Standards- Qatar).
- Developing this new practicum on computer security, focusing on defences for real-world attacks and security.
- My teaching experience also includes curriculum development of cybercrime subjects.
- Conducting research in the area of e-learning security, supply chain management, big data analysis and computer security.

Oct 2015- Jul 2017 MIT, Melbourne, Australia
- Lecturer - I taught the following subjects for both level (undergraduate students and postgraduate students):
  - Computer Forensics (BN309) – (Bachelor Students).
  - Computer Forensics (MN613) - (Master Students).
  - IT Security Management (BN311) – (Bachelor Students).
  - IT Security Management (MN604) - (Master Students).
  - Network Security (BN203) – (Bachelor Students).
  - Network Security (MN502) - (Master Students).
  - Networked Application Management (MN504) - (Master Students).
  - Research Methods and Project Design (MN691) - (Master Students).

- Virtual Private Network (BN305) - – (Bachelor Students).
- Virtual Private Networks (MN610) - (Master Students).
- Wireless Network and Security (MN603) (Master Students).
- Wireless Networks and Security (BN303) - (Bachelor Students).
- Application Development for Mobile Platforms (COIT20270)- (Master Students).
- Mobile Game Development (COIT20271) - (Master Students).
- Introduction to Programming (COIT20245) - (Master Students).
- Mobile Web Apps (COIT20269) - (Master Students).
- Operating System Principles (COSC1112/COSC1114) – (Bachelor Students).
- Professional Skills in Information Communication Technology (COIT20249) (Master Students).

-Developing teaching materials including lecturing slides, workshops, case studies, lab instructions and tutorials.

-Providing supervision of postgraduate students, during my work I co-supervised 7 Master students in their thesis.

- Working on various problems related to the area of cyber-security.

Oct 2014- Sep 2015 Al-Isra University, Amman, Jordan

-Assistant Professor/ Lecturer - I lectured the following subjects for undergraduate students:
- Compilers and Translators.
- Computer Skills.
- Information Security.

- Conducting research in the area of Cybercrime and digital forensics.

-Developing learning materials including lecture notes, case studies, lab instructions and tutorials.

-Redesigned core grad-level computer security courses.

Apr 2011 – Aug 2014 Deakin University, Melbourne, Australia

-Researcher and teacher - I taught the following subjects for both level (undergraduate students and postgraduate students):
- Computer Crime and Digital Forensics (SIT282).
- Computer Programming (SIT102;) Python, C++, Website Design Java.
- Corporate Computer and Network Security (SIT384).
- Database and Information Retrieval (SIT103).
- Fundamental of Information Technology (SIT101).
- Introduction to Computer Security (SIT182).

- Advancing security (static/dynamic), data mining and statistical data analysis.

-Collecting and analysing big data of smartphone malware, in a secure environment, including performing testing and analysis.

-Designing, developing and administering educational websites and Deakin's learning management system.

-Developing learning materials including lecture, workshops, case studies, lab instructions and tutorials.

-Lecturing as a guest speaker for Master Students classes in information technology and criminology courses. (*Cybercrime and the internet, techniques for data mining*).

- Providing strategic advice in the selection of learning strategies and educational technologies.

- Providing support, analysis and issue resolution for learning system support.

-Supervising six research students on their research projects along with Dr. Tim Wilkin.

May 2011 – Sep 2011 Federation University Australia,

- Administering and designing LANs, WANs internet/intranet, and voice networks.

-Analysing non-standard technical requests and engineers' solutions that meet university

needs, adhere to security rules, interoperate well with existing systems, and stay within budget.
- Communicating and negotiating with users, specialists, other staff and suppliers.
-Configuring Cisco firewalls, Cisco switches and routers, VOIP circuits, station cabling and wireless networking.
-Ensuring network connectivity of all servers, workstations, telephony equipment, fax machines, and other network appliances.
- Managing hardware upgrade related to network infrastructure.
- Monitoring and maintaining the health, integrity, and performance of the university network.
- Responsible for communication protocols, configuration, integration & security.
- Troubleshooting of computer systems, design new physical and logical network schemes.
- Writing technical designs and documentation.

March 2010 – Apr 2011 Jordanian Electric Power Company (JEPCO)
-Network Security Engineer: protecting the information from unauthorized access, which was achieved through managing network systems, configuration systems, DHCP systems, performing maintenance systems, routers [static/ dynamic/ monitor], firewalls [policy/ address/ services/ schedule/ virtual IP], VPNs, user and group management, antivirus and anti-spam services, analysing log files and web filtering.
- Wrote and documented security policies and procedures for specific issues in a team.
- Wrote and updated security plans to meet NIST 800.53 standards as team,
- Performed hard drive forensics looking for unclassified information.
- Performed random security inspections for a site containing 1000 employees.
- Wrote batch files to force check in and updates for the company's computers.
-Designing and implementing networks for clients to meet their functional and non-functional requirements.
-Identifying technology limitations and vulnerabilities in existing systems and associated processes, procedures and methods.
-Preparing system analysis, feasibility studies, project ideas, and defining functional design requirements for complex integrated management information systems of the organization, translating user needs into new applications, integrating existing modules and developing local enhancements.
-Providing leadership in Disaster Recovery development planning.
-Testing, debugging, diagnosing and correcting errors and faults in an applications programming language within established testing protocols, guidelines and quality standards to ensure programs and applications perform to specification.
-Writing and maintaining program technical program, end user documentation and operational procedures to meet system requirements, system designs and technical specifications in accordance with quality accredited standards.
-Beside the above duties, I was an industry supervisor for all undergraduate students in the final year(s) of study whom chose to get trained at JEPCO in the field of information technology. In Jordan, all undergraduate students must complete a training course in the final year of their study. The course requires the students to work in industry- related project for a minimum of one semester. The research project is supervised by both academic and industry, of which, I was an industry supervisor. I was responsible for providing knowledge, mentorship, and skills to the undergraduates and graduates - not just at a university level but also by applying their research technical expertise to industry related "real world" fields.

HONORS and AWARDS

- CCQ (2019) ("*Recognizes Blackboard Exemplary Course Award*"). The award highlights technologically rich, engaging, well designed, and pedagogically sound courses that showcase best practices for the user community.
- Melbourne institute of technology (2016) ("*Recognizes an outstanding teacher in both elementary and advanced courses, an understanding counsellor of students who seek guidance in their choice of a career, a contributor to the educational growth of his College, and a teacher whose scholarly integrity pervades his service and the profession of cyber-security*").
- The 2012 scholarship of Deakin University Postgraduate Research Scholarships (DUPRS). This scholarship commenced on 7/09/2012 to 1/08/2014.
- The 2012 award of Stratsec to work in research project entitled "*Protecting Smartphones from Malware*" with UniSA from July 2012 – September 2012. The award was funded by Stratsec that is a BAE Systems company and is Australia's largest and most successful cyber security consulting firm with considerable expertise in the public and private sector.
- The 2011 International Student Barometer prize by Deakin University.
- The 2011 research award (20,000 AUD) funded by the school of information technology Deakin University.
- The 2011 Microsoft Researcher award to attend and present in "*Data Management and Information Retrieval*" (NSW, Australia) 26 Sep-1 Oct 2011.
- The Research Network for a Secure Australia (RNSA) award to attend and present in "*Safeguarding Australia*", Sep 2011.
- The 2009 Royal Hashemite Royal Scholarship award in the Faculty of Engineering Al-Balqa Applied University. This scholarship started from 10/09/2005 to 15/08/2009.

JOURNAL PUBLICATIONS

- Alazab Moutaz, Alhyari Salah, Awajan Albara, Abdallah Ayman (2020). Blockchain Technology in Supply Chain Management: An Empirical Study of the Factors Affecting User Adoption/Acceptance. (submitted).
- Alazab Moutaz., Awajan Albara, Mesleh Abed alwadood., Jatana Venash. Alhyari Salah (2020). COVID-19 Prediction and Detection Using Artificial Intelligence. (submitted).
- Alazab Moutaz. (2020). Automated Malware Detection in Mobile App Stores Based on Robust Feature Generation. *Electronics*, 9(3), 435.
- Alazab Moutaz, Alazab Mamoun., Shalaginov Andri., Mesleh Abed alwadood, Awajan Albara. (2020). Intelligent mobile malware detection using permission requests and api calls. *Future Generation Computer Systems: the international journal of grid computing: theory, methods and applications, 107, 509-521. https://doi.org/10.1016/j.future.2020.02.002*.
- Suifan Taghrid, Alazab Moutaz, Alhyari Salah. (2019). Trade-off among lean, agile, resilient and green paradigms: An empirical study on pharmaceutical industry in Jordan using a TOPSIS-Entropy Method. *International Journal of Advanced Operations Management*. Vol.11, Nos.1/2 pp.69- 100.
- Almsadeh Shadi, Zaraqo Jamal and Alazab Moutaz (2018) A Novel Authentication and Authorization ModelBased on Multiple Encryption Techniques for Adopting Secure E-Learning System, *Journal of Theoretical and Applied Information Technology*. Vol.96, No.6, pp.1529- 1537.
- Alhyari Salah, Alazab Moutaz, Venkatraman Sitalakshmi, Alazab Mamoun, and Alazab Ammar (2013) Performance Evaluation of E-Government Services Using Balanced Scorecard-An Empirical Study in Jordan." *Benchmarking: An International Journal* 20, no. 4 (2013): 4-4.

- Alhyari, Salah, Alazab Moutaz, Venkatraman Sitalakshmi, Alazab Mamoun, and Alazab Ammar (2013) Six Sigma Approach to Improve Quality in E-Services: An Empirical Study in Jordan," IGI Global, *The International Journal of Electronic Government Research (IJEGR)*, vol. 8, pp. 57-74.
- Moonsamy, Veelasha, Alazab, Moutaz and Batten, Lynn (2012) Towards an understanding of the impact of advertising on data leaks, *International journal of security and networks*, vol. 7, no. 3, pp. 181-193, Inderscience Publishers, London, England.

BOOK CHAPTERS

- Alazab, Moutaz and Batten, Lynn (2015) Survey in Smartphone Malware Techniques, *New Threats and Countermeasures in Digital Crime and Cyber Terrorism.*
- Alazab, Mamoun, Venkatraman, Sitalakshmi, Watters, Paul and Alazab, Moutaz (2013) Information security governance: the art of detecting hidden malware, *IT security governance innovations: theory and research*, pp. 293-315, IGI Global, Hershey, Pa.

CONFERENCE PUBLICATIONS

- Batten, Lynn, Moonsamy, Veelasha, Moutaz, Alazab (2015) Smartphone Applications, Malwarae and Data Theft, ICC3: *Advances in Intelligent Systems and Computing*, pp. 1-6, ICITA, India.
- Alazab, Moutaz, Moonsamy, Veelasha, Batten, Lynn, Tian, Ronghua and Lantz, Patrik (2012) Analysis of malicious and clean Android applications, ICDCSW 2012: *Proceedings of the 32nd International Conference on Distributed Computing Systems*, pp. 608-616, IEEE, Los Alamitos, Calif.
- Alazab, Moutaz, Alazab, Ammar and Batten Lynn (2011) Smartphone malware based on synchronisation vulnerabilities, ICITA 2011: *Proceedings of the 7th International Conference on Information Technology and Applications*, pp. 1-6, ICITA, Sydney, N.S.W.
- Alazab, Moutaz (2011 Detection of Smartphone Malware on the Android Platform" In *10th Safeguarding Australia Conference: Recalibrating the security response*. Canberra, Australia.
- Alazab, Mamoun, Venkatraman, Sitalakshmi, Watters, Paul and Alazab, Moutaz (2011) Zero-day malware detection based on supervised learning algorithms of API call signatures, *AusDM 11: Proceedings of the Ninth Australasian Data Mining Conference*, pp. 171-182, Australian Computer Society, Ballarat, Vic.
- Alazab, Mamoun, Venkatraman, Sitalakshmi, Watters, Paul, Alazab, Moutaz and Alazab, Ammar (2012) Cybercrime: the case of obfuscated malware, *Global security, safety, and sustainability: 7th International and 4th e-Democracy Joint Conferences, ICGS3/e-Democracy 2011*, Thessaloniki, Greece, August 24-26, 2011, Revised selected papers, pp. 204-211, Springer-Verlag, Berlin, Germany.
- Alazab, Ammar, Alazab, Moutaz, Abawajy, Jemal and Hobbs, Michael (2011) Web application protection against SQL injection attack, ICITA 2011: *Proceedings of the 7th International Conference on Information Technology and Applications ICITA 2011*, pp. 1-7, IEEE, Sydney, N.S.W.
- Alazab, Ammar, Hobbs, Michael, Abawajy, Jemal and Alazab, Moutaz (2012) Using feature selection for intrusion detection system, ISCIT 2012: *Proceedings of the 12th IEEE International Symposium on Communications and Information Technologies*, pp. 296-301, IEEE, Piscataway, N. J.

RESEARCH POSTERS

- Alazab Moutaz, and Alawamelh Hisham *"Intelligent Robot Car" faculty of Engineering,* Al-Balqa Applied university, August 2009. Al Salt, Jordan.

-Alazab Moutaz "*Detecting Malware on the smartphone devices*". Kioloa NSW Oct 2011, Australia.

RESEARCH PRESENTATIONS

-Alazab Moutaz "*Toward understanding malware analysis*", December 2018, Doha- Qatar.

-Alazab Moutaz "*Malware detection using machine learning techniques*", November 2018, Doha- Qatar.
-Alazab Moutaz "*Analysis of Malicious and Benign Android* "June 2012. Macau, China.
-Alazab Moutaz "Mobile Malware Detection Based on Behavioural Features" Student Association, Deakin University, May 2011, Victoria, Australia.
- Alazab Moutaz "*Overview of Behavioural-Based Detection for Android-Based Devices*" Deakin University, May 2011, Vic, Australia.
-Alazab Moutaz "*Malware Analysis, Detection and Prevention on Smartphone*" Deakin University, May 2011, Victoria, Australia.
- Alazab Moutaz "*Smartphone's Threats*" 10th Safeguarding Australia Conference: Recalibrating the security response, September 2011. Canberra, Australia.

PROGRAM COMMITTEES
- Global 2020 Congress on Engineering Sciences, Technologies and Applications (GC-Engineering 2020).
- International Conference on Artificial Intelligence and Intelligent Systems (MIC-ArtInt 2020).
- Global 2020 Congress on Engineering Sciences, Technologies and Applications (GC-Engineering 2020).
-InternationalConference on Cloud Computing Technologies and Applications (CloudTech'18).
-InternationalConference on Cloud Computing Technologies and Applications (CloudTech'17).
-International Conference on Information and Communication Systems (ICICS 2017).
-The 2nd Cybersecurity and Cyberforensics Conference (CCC 2017).
-International Conference on new Trends in Computing Sciences (ICTCS).
-International Conference on Digital Information Processing, E-Business and Cloud Computing (DIPECC2016)
-International Conference on Applications and Techniques in Information Security, 2016.
-International Conference on Cybersecurity and Cyberforensics Conference, 2016.
-The Third International Conference on Digital Security and Forensics, 2016.
-The 8th International Conference on Information and Communication Systems
MEMBERSHIP

- **Member** - Australian Computer Society (**ACS**)
- **Member** - Australian Mathematical Society (**AusTMS)**
- **Member** - Jordan Engineers Association (**JEA**)
- **Member** - The ARC Complex Open Systems Research Network (**COSNet**)
- **Member** - The Association for Computing Machinery (**ACM**)
- **Member** - The Australian Research Collaboration Service (**ARCS**)
- **Member** - The Council of Australian Postgraduate Associations (**CAPA**)
- **Member** - The Institute of Electrical and Electronics Engineering (**IEEE**)
- **Member** - The International Association for Cryptologic Research (**IACR**)
- **Member** -The ARC Network in Human Communication Science (**HCSNet**)
- **Member** -The Combinatorial Mathematics Society of Australasia (**CMSA**)

SKILLS/ STRENGTHEN

- **Programming:** Python, C, C++, Visual Basic, .NET, Java and Matlab.
- **Training:** CISSP, CISSM, CompTIA Security+, Malware Analysis, Digital Forensics, CCNA, CCNP.
- **OS:** Windows, Unix, Linux and Mac OS
- **Database:** Oracle, MySQL, SQL Server, and MongoDB based NoSQL Cloud Database.
- **Research Tools:** Endnote.
- **Web Design:** HTML, DHTML, Java Script, FrontPage, Image Ready, Photoshop, Oracle Application Server, Macromedia Flash, Macromedia Director and Snag It.
- **Network:** Switches and Routers configuration, Designing and Implementing Networks.
- **Professional:** Self-motivated, creative thinker, Enthusiastic & creative, able to work under pressure and willing to travel and relocate.

REFERENCES:

- **A/Prof. Johnson Agbinya**
Head, School of Information Technology & Engineering
Melbourne Institute of Technology
284 -294 La Trobe Street Melbourne,
Victoria 3000, Australia
Email: Jagbinya@mit.edu.au
Tel: +61 3 8600 6711

- **Prof. Lynn Batten**
Director, Security Research Group
Deakin University
221 Burwood Highway, Burwood 3125
Victoria, Australia
Email: Lynn.Batten@deakin.edu.au
Tel: +61 3 9251 7474

- **A/Prof. Savitri Bevinakoppa**
Deputy Head, School of IT and
Engineering Melbourne Institute of
Technology
284 -294 La Trobe Street Melbourne,
Victoria 3000, Australia
Email:
Sbevinakoppa@mit.edu.au Tel:
+61 3 8600 6718

- **A/Prof. Michael Hobbs**
Associate Head of School, Teaching
and Learning
Deakin University
221 Burwood Highway, Burwood
3125 Victoria, Australia
Email:
Mick@deakin.edu.au Tel:
+61 3 5227 3342