Mohammad Alnabhan

Professor of Computer Science

Personal Information

Nationality: Jordanian

Major: Computer Science.

Specialization: Networks Security.

Language: English, Arabic (mother tongue).

Academic Rank: Professor.

Contact Details:
Computer Science Department
King Hussein School of Computing Sciences
Princess Sumaya University for Technology
Amman, Jordan.

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Education

2006 – 2009   **PhD** (Computer Science)

Brunel University, West London, United Kingdom

2004 – 2006   **Master** (Computer Science)

Anglia Ruskin University, Chelmsford, United Kingdom.

2000 – 2004   **BSc** (Computer Science)

Mu'tah University, Mu'tah, Jordan.

Academic Experience

9/2021 - Present	Professor, Computer Science Department, King Hussein School of Computing Sciences, Princess Sumaya University of Technology, Jordan.
10/2020 –9/2021	Professor, Computer Science Department, Faculty of Information Technology, Mu'tah University, Jordan.
9/2015 –10/2020	Associate Professor, Computer Science Department, Faculty of Information Technology, Mu'tah University, Jordan.
10/2014 – 9/2015	Associate Professor, Computer Science Department, Faculty of Information Technology, Jerash University, Jordan.
12/2009 – 10/2014	Assistant Professor, Computer Science Department, Faculty of Information Technology, Jerash University, Jordan.
6/2006 – 2009	Research Assistant, Brunel University, United Kingdom.

Managerial Experience

2020 - 2021	Deputy Dean of Faculty of Information Technology, Mutah University, Jordan.
2011 – 2015	Acting Dean of Faculty of Information Technology, Jerash University, Jordan. (Founder Dean)
2010 – 2011	Head of Computer Science Department, Jerash University, Jordan.

Teaching & Supervision Experience

- **Postgraduate Level:**
  - Advanced Computer Networks.
  - Advanced Network Security.
  - Information Security Risk Management.
- **Bachelor Level:**
  - Programming Principles; Object oriented programming; Visual programming; Internet Programming; Mobile applications programming (Android platforms).
  - Computer Networks; Wireless Networks; Network Management; Network Monitoring & Evaluation, Computer and Networks Security, and Cryptography, Cyber security fundamentals, Information security risk management.
  - E-Commerce; E-Business, E-Government, Software project Management, Management Information Systems (MIS), Database; Technical Communication Skills.
  - ❖ *Supervised more than twenty MSc Students in the fields of Computer networks, Computer Security, and Software engineering.*

Administration Responsibilities and Capability

- Designing and developing study planes and course syllabuses according to national QA requirements and International ABET accreditation.
- Strategic planning.
- Local Quality Assurance (QA) certification for IT faculty and academic programs.
- ABET accreditation for Computer Science (CS) and Computer Information System (CIS) Academic Programs.
- Involved in several University ICT projects. This included the following projects:
  1. Website design & development.
  2. E- Registration system development.
  3. E-Learning & online exams systems development.
  4. Data Centre infrastructure development.

Scholar Activities and External Recognition

2015 – Present   Research and development consultation to Blokvers for projects related to DLT, DID and blockchain technology.

2015 – Present   Research and development consultation to netcetera (Swizerland and UAE) for projects related to Smart identification, Secure payment systems and block chain.

2015 - Present   External Examiner of several MSc dissertations at national and international Universities. Such as Bahrain University, Tabuk University, Aman Arab University, Hashemite University, Hussain Bin Tall University and Ahlia Amman University.

2008 – 2017   Reviewer in several Journals such as IJESMA, IJHCR and IJHISI.

2009 – 2015   Director of the Annual Symposium of IT Students in Jordan (SITS).

2008 – 2014   Academic consultant to Knowledge Well Ltd. Chelmsford, United Kingdom

2009 – 2012   Visiting scholar at the Centre for Computer and Electronic System Research (CESR), Brunel University, United Kingdom

2011 – 2012   Microsoft Academic Advisor, Jerash University, Jordan

2007 – 2012   Member of IET, IEEE, Royal Institute of Navigation (RIN), Arab Computer Society, Jordanian Academic Association.

2009 – 2011   Jerash University representative at the Higher Council for Science & Technology, Jordan.

Units, Committees & Councils

2023 – Present	Member of Scientific Research Council, PSUT, Jordan.
2023 - Present	Member of Scientific Research and Conferences committee, CS Department, PSUT, Jordan.
2021 - 2022	Director of Scientific Research and Conferences committee, CS Department, PSUT, Jordan.
2021 - Present	Member of library committee, CS Department, PSUT, Jordan.
2020 - 2021	Manager of Strategic Planning team, IT Faculty, Mutah University, Jordan.
2020 – 2021	Director of ABET accreditation committee, IT Faculty, Mutah University, Jordan.
2020 – 2021	Director of Graduate Studies committee, IT Faculty, Mutah University, Jordan.
2020 - 2021	Member of Information Technology Faculty Member of IT Faculty council, Mutah University, Jordan.
2015 - 2021	Member of research committee, IT Faculty, Mutah University, Jordan
2015 - 2020	Member of Graduate studies committee, IT Faculty, Mutah University, Jordan
2014 - 2015	Member of Appointment and Promotion Committee, Jerash University, Jordan.
2012 – 2015	Director of Online and Electronic Services Unit, Jerash University, Jordan.
2011 – 2015	Member of University Study Plans Development Committee, Jerash University, Jordan.
2011 – 2015	Member of Deans Council, Jerash University, Jordan.
2011 – 2015	Member of University Council, Jerash University, Jordan.
2010 – 2012	Member of University Development and Planning Committee, Jerash University, Jordan.

Awards & Achievements

- Entrepreneurship and Innovation Grant from Ministry of Higher Education, Second call of 2019, Project ID (IE/2/10/2019).
- Best paper Award, Computer and Mobile Applications Workshop, May 2010 (MCA – 10), Jordan.
- Winner of the 2008 Vice Chancellor's Prize for Best Postgraduate Research Students, Brunel University, UK.

Research and Innovation Projects

- **Project Title:** Jordan Academic BlockChain Network (AcChain).
- **Project Scope:** Information and Network Security.
- **Role:** Principal Investigator (Project Manager).
- **Grand Total:** 55,000 JD.
- **Project Duration:** 15 Months.
- **Funding Body:** Scientific Research & Innovation Support Fund (SRISF), Ministry of Higher Education, Jordan.

Conferences & Workshops

- Third Digital Transformation Jordan Conference, March 6 – 7, the Ritz-Carlton, Amman, Jordan, 2023.
- The 17th edition World Cyber Security Summit, August 15-16, the Ritz-Carlton, Amman, Jordan, 2022.
- The Financial Technologies & Cyber Security Exhibition & Conference on 9 & 10 August 2022 at St. Regis – Amman
- 20th Jordan Economic Forum, Blockchain & Financial Innovation Summit, 13 – 14 March 2022, Dead sea, Jordan.
- Instructional Design for E-Learning (IDEL) Course training, Ministry of Higher Education & Scientific Research and UNHCR Jordan Office/ Education Unit, Le Royal Hotel from Dec 1st- Dec 5th, 2019.
- The third edition of the International Conference on Intelligent Systems and Computer Vision (ISCV2018), fez, morocco, April 2018.
- Third International Conference on Cryptography and Information Security (CRIS 2017), Geneva, Switzerland, March 25-26, 2017.
- International Workshop in Arabic Natural Language Processing: Models, Systems and e-Applications. Tabuk, KSA, 7th and 8th of October, 2015**.**
- International Conference on Computational and Experimental Science and Engineering, 24-29 October, 2014, Antalya, Turkey.
- European, Mediterranean International conference on Information systems, Windsor, United Kingdom, October 17th - 18th , 2013
- European, Mediterranean International conference on Information systems, Munich, !
- European, Mediterranean International conference on Information systems, Athens, Greece May 30 – 31, 2011.
- Third international conference on E-learning, Manama- Bahrain, 6 – 8 April (2010).
- European, Mediterranean International conference on Information systems, Abu Dhabi, 12-13 April 2010

- The 6th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-08), Doha, Qatar, March 31 - April 4, 2008
- The Navigation Conference and the International Loran Association Exhibition (*NAV08*/ILA37), Royal Institute of Navigation (RIN), Church House, London, UK. 27th – 30 of October 2008.

Research Interest

- Localization and QoS in wireless networks.
- Distributed Ledger Technology.
- Lightweight Cryptography.
- Authentication Frameworks in pervasive computing.
- AI enabeled security solutions.

Publications

1. Journals:

➢ Pati, Abhilash, Manoranjan Parhi, **Mohammad Alnabhan**, Binod Kumar Pattanayak, Ahmad Khader Habboush, and Mohammad K. Al Nawayseh. 2023. "An IoT-Fog-Cloud Integrated Framework for Real-Time Remote Cardiovascular Disease Diagnosis" *Informatics* 10, no. 1: 21

➢ Al-Qudah, Mahmoud, Zein Ashi, **Mohammad Alnabhan**, and Qasem Abu Al-Haija. 2023. "Effective One-Class Classifier Model for Memory Dump Malware Detection" *Journal of Sensor and Actuator Networks* 12, no. 1: 5

➢ Saumendra Pattnaik, Suprava Ranjan Laha, Binod Kumar Pattanayak, Ricky Mohanty, **Mohammad Alnabhan**, Mihir Narayan Mohanty, (2022), Software reliability reckoning by applying neural network algorithm, Journal of Information & Optimization Sciences, Journal of Information and Optimization Sciences, 43(5):1061-1071

➢ Emad K. Qalaja , Qasem Abu Al-Haija , Afaf Tareef , **Mohammad M. Al-Nabhan**, (2022). Inclusive Study of Fake News Detection for COVID-19 with New Dataset using Supervised Learning Algorithms", International Journal of Advanced Computer Science and Applications (IJACSA) - Volume 13 No 8 August 2022.

➢ **Mohammad Alnabhan**, Ahmad Khader Habboush, Qasem Abu Al-Haija, Arup Kumar Mohanty, Saumendra Pattnaik, Binod Kumar Pattanayak, (2022). Hyper-Tuned CNN Using EVO Technique for Efficient Biomedical Image Classification, Mobile Information Systems, vol. 2022, Article. ID 2123662,

➢ Sultan Al-Masaeed, Mohammad Al Nawayseh, Bader AlFawwaz, Mahmoud Maqableh, **Mohammad Alnabhan**, Ra'ed Masa'deh, Atallah AL-Shatnawi. (2022). Factors Affecting Consumers' Intention to Use Mobile Ride Hailing Services in Developing

Countries. International Journal of Interactive Mobile Technologies (iJIM), 16(11), pp. 207–223.

➢ **Mohammad Alnabhan,** Sajeda Al-Jaafreh, Ahmad Abadleh, Mohammad Atoum, Awni Hammouri, Mahmoud Al-dalahmeh. (2021): Enhanced D2D Communication Model in 5G Networks, International Journal of Computing and Digital Systems. Volume 10, issue 1, pp.217-223.

➢ **Mohammad M. Alnabhan**. (2020): Advanced GPSR in Mobile Ad-hoc Networks (MANETs), International Journal of Interactive Mobile Technologies, Volume 14, (2020).

➢ **Mohammad Alnabhan,** Enas Al-qatawneh, Ahmad Abadleh, Mohammed Atoum, Mohammad Alnawyseh. (2020): Efficient Handover Approach in 5G Mobile Networks, International Journal on Advanced Science, Engineering and Information Technology, Volume 10, Issue 4.

➢ Mustafa Hammad, **Mohammad Alnabhan**, Iyad Abu Doush, Gheed Mufied Alsalem, Fatima Abdalla Al-Alem, Mouhammd Mahmoud Al-awadi (2020): Evaluating Usability and Content Accessibility for e-Learning Websites in the Middle East. International Journal of Technology and Human Interaction Volume 16 , Issue 1, 2020.

➢ **Mohammad Alnabhan**, Saleem Alsaraireha, Binod K. Pattanayak, Ahmad K. Habboush and Mustafa Hammad (2019): Performance analysis and enhancement of position-based routing protocols in MANETS, International Journal of Knowledge-based and Intelligent Engineering Systems, Volume 23, Issue 2, pp.109–120, 2019.

➢ Mustafa Hammad, **Mohammad Alnabhan**, Sarah Al-Sarairah (2019): Combining Structural and Semantic Cohesion Measures to Identify Extract Class Refactoring, International Journal of Computer Applications in Technology, Volume 61, Number 3, 2019.

➢ Mohammad Al-Nawayseh, Aladdin Baarah, **Mohammad Alnabhan**, Sultan Al-masaeed (2018): Mobile Learning Adoption in Jordan: Technology Influencing Factors, International Journal of Networking and Virtual Organisations, Volume 20, Issue 4, 2018.

➢ **Mohammad Alnabhan**, Ahmad Abu-Al-Aish, Sultan Al-Masaeed (2018): Collaborative and Ubiquitous Mobile Learning System Prototype, International Journal of Computer Applications in Technology, Volume 58, Issue 4, 2018.

➢ **Mohammad Alnabhan** (2018): Location-Based Clustering and Collaborative Filtering for Mobile Learning, International Journal of Networking and Virtual Organisations, Volume 19, Issue 1, 2018.

➢ Awni Hammouri, Mustafa Hammad, **Mohammad Alnabhan**, Fatima AL Sarayrah (2018): Software Bug Prediction Using Machine Learning Approach, (IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 9, No. 2, 2018.

➢ **Mohammad Alnabhan,** Mahmoud Alshuqran, Mustafa Hammad, Mohammad Al Nawayseh (2017): Performance Evaluation of Unicast Routing Protocols in MANETs – Current State and Future Prospects. International Journal of Interactive Mobile Technologies. Vol.11, No.1, 2017.

- **Mohammad Alnabhan,** (2014): Ubiquity and Context-Aware M-Learning Model: A Mobile Virtual Community Approach, to appear in the International Journal for handheld Computing Research (IJHCR), Vol. 5, No.1, pp.41 – 55, 2014.

- **Mohammad Alnabhan,** Nasim Matar, Abdulameer Hussain, Ja'afer AL-Saraireh (2014): Location-Aware Mobile Learning Model: A Case for Positioning Performance Measurements, Computer and Information Science Journal (CIS), Vol. 7, No.1, 2014.

- **Mohammad Alnabhan,** Ahmad Haboush, Anas AL-Badareen, Mohammad Al-nawayseh, Bassam EL-Zaghmouri, (2014): An Evaluation Framework for Requirements Definition of Software Development, Journal of Convergence Information Technology, Vol. 9, No. 3, 2018.

- Ahmad Haboush, **Mohammad Alnabhan,** Anas AL-Badareen, Mohammad Al-nawayseh, Bassam EL-Zaghmouri, (2014): Investigating Software Maintainability Development: A case for ISO 9126, International Journal of Computer Science Issues, Vol.11, No.2, 2014.

- **Mohammad Alnabhan,** Ahmad Haboush, Binod Kumar Pattanayak, Mohammad Alnawaiseh, Anas AL-Badareen, (2014): Emerging Trends in Intrusion Detection in Mobile Ad-Hoc Networks (MANETs), Information Technology Journal, 13 (13), pp.2065-2078.

- Nasim Matar**, Mohammad Alnabhan,** (2014): Evaluating Electronic Health Services and Patients Requirements in Jordanian Hospitals, International Arab Journal of e-Technology, 3 (4).

- **Mohammad Alnabhan,** Yousef Aljaraideh (2014): Collaborative Mobile Learning Adoption Model: A Case Study for Jordan, to appear in the International Journal of Emerging E-learning Technologies, Vol. 9, No. 8, pp.4-10, 2014.

- Mohammad Al-nawayseh, **Mohammad Alnabhan,** Mu'taz Al-Debei, Wamadeva Balachandran (2013): An Adaptive Decision Support System for Last Mile Logistics in E-Commerce: A Study on Online Grocery Shopping, International Journal of Decision Support System Technology, Vol.5, No.1, pp.41-66, 2013.

- **Mohammad Alnabhan**, Ahmad Haboush, Ja'afer AL-Saraireh, Nasim Mattar (2012): A Preliminary Evaluation Study for M-learning Services and Implications for Future Design. World of Computer Science and Information Technology Journal (WCSIT), ISSN: 2221-0741 Vol. 2, No. 1, pp.13-17, 2012.

- Ahmad Haboush, **Mohammad Alnabhan,** Mutasam, Al – Tarazi, M., & Al – Rawajbeh. M. (2012): Load Balancing Using Multiple Node Disjoint Paths. Computer and Information Science Journal, Vol. 5, No. 3, pp.83 – 89.

- Ja'afar AL-Saraireh, Mohammad Saraireh, Saleh Saraireh and **Mohammad Alnabhan** (2011): Formal Analysis of a Novel Mutual Authentication and Key Agreement Protocol, Journal of Computer Science and Technology (JCS&T), Vol. 11 No. 2, 2011.

- **Mohammad Alnabhan,** Suliaman Almasri, Vanja Garaj, Wamadeva Balachandran, and Ziad Hunait (2010): Client-Server Based LBS Architecture: A Novel Positioning Module for Improved Positioning Performance, International Journal of Handheld Computing Research (IJHCR). Vol 2, No. 2, pp. 1-11, 2010.

- Sulaiman Almasri, **Mohammad Alnabhan,** Ziad Hunaiti, and Wamadeva Balachandran (2009): Location-based services (LBS) in micro-scale navigation (2009): shortcomings and recommendations, International Journal of E-Services and Mobile Applications, Vol. 1, No. 4, pp.51-71, 2009.

2. <u>Book Chapters:</u>

- Qasem Abu Al-Haija, **Mohammad Alnabhan**, Eyad Saleh, Mohammad Al-Omari (2022): Chapter 40: Blockchain Technology Solutions for the Security of IoT-based Healthcare Systems: 6. Application of Blockchain for security", Published by Elsevier Press, June 2022.

- Almasri, S., **Alnabhan, M**., Hunaiti, Z., and Sedoyeka, E. (2011): Location-Based Services (LBS) in Micro-Scale Navigation: Shortcomings and Recommendations. In A. Scupola (Ed.), Developing Technologies in E-Services, Self-Services, and Mobile Communication: New Concepts (pp. 234-252). Hershey, PA: Information Science Reference. doi:10.4018/978-1-60960-607-7.ch013.

3. <u>Conferences:</u>

2022:

- Abdel Kareem Klaib, Mohammad Al-Nabhan and Qasem Abu Al-Haija, "Identifying Memory Dump Malware Using Supervised Learning", presented in preceding of the "3rd International Conference on Sustainable Expert Systems (ICSES - 2022)" during 9-10, September 2022 in Nepal.

- Ayat Droos, Qasem Abu Al-Haija, Mohammad Alnabhan, Lightweight Detection System for Low-Rate DDoS Attack on Software-Defined-IoT, 6th IET Smart Cities Symposium, 6-9 December 2022, Zain - e-Learning Center - University of Bahrain, Bahrain

2021:

- Qasem Abu Al-Haija, Eyad Saleh and **Mohammad Alnabhan,** Detecting Port Scan Attacks Using Logistic Regression, The forth International Symposium on Advanced Electrical and Communication Technologies (ISAECT), IEEE, December 2021, Khobar, KSA.

2020:

- Alnawyseh, M. **Alnabhan, M**. Elayah, E, AL-Iede, M. AL Oweidat, K. and Aledi, S. (2020): The use of mobile health applications for Asthma self-management: Design Study. To appear in proceeding of 35th IBIMA Conference: 1 – 2 April, 2020, Seville, Spain.

2018:

- **Alnabhan**, **M.** Hammouri, M. Hammad, M. Otoum, M. Al-Thnebat, O. 2D Visualization for Object-Oriented Software Systems, the third edition of the International Conference on Intelligent Systems and Computer Vision (ISCV2018), fez, morocco, April 2018.

2017:

- Atoum, M. **Alnabhan**, **M**. Habboush A (2017): Advanced LSB Technique for Audio Stenoraphy.Third International Conference on Cryptography and Information Security (CRI S 2017), Geneva, Switzerland, March 25-26, 2017.

2015:

- Abu shquier, M. **Alnabhan**, **M** (2015): Arabic Tri-Literal Word Analyser : Rule based Approach. International Workshop in Arabic Natural Language Processing: Models, Systems and e-Applications. Tabuk, KSA, 7th and 8th of October, 2015**.**

2014:

- **AL Nabhan, M.,** Abu-Al-Aish, A., (2014): M-learning QoS Measurement Model: AContext Adaptation Approach, International Conference on Computational and Experimental Science and Engineering, 24-29 October, 2014, Antalya, Turkey.

2013:

- AL Nawayseh, M., **AL Nabhan, M**., Balachandran , w., (2013): Wimax Technology Adoption in Education: A case for Jordan. European, Mediterranean International conference on Information systems, United Kingdom, October 17th - 18th , 2013.

2012:

- **AL Nabhan, M.**, Mattar, N. (2012): Wimax Technology Adoption in Education: A case for Jordan European, Mediterranean International conference on Information systems, Munich, Germany, June 7th - 8th , 2012.

2011:

- **AL Nabhan, M.**, (2011): An Integrated Context Adaptive M-learning System, European, Mediterranean & Middle Eastern Conference on Information Systems 2011 (EMCIS2011) May 30-31 2011, Athens, Greece.

2010:

- **Alnabhan, M.**, and Abu Shquier, M. (2010) 'Location Based Services as an Adaptive M-learning System'. Third International Conference of Zian E-learning centre, April, 2010, Manamah, Bahrain.

2009:

> **Alnabhan, M**., Balachandran, W., Garaj, V. and Sedoyeka, E. (2009b) 'An Adaptive and Accurate GPS Positioning Model for LBS Applications: A Predefined User and Application Parameters Approach', The second GNSS-09 Vulnerabilities and Solutions Conference, 2 - 5 September, Baska, Krk Island, Croatia.

2008:

> Sedoyeka, E., Hunaiti, Z., **Alnabhan, M.**, and Balachandran, W. (2008) 'WiMAX Mesh Networks for Underserved Areas', Proceeding of the 6th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-08), March 31st - April 4th, Doha, Qatar, pp.1070-1075.