

# MAMDOUH ALENEZI, PhD

College of Computer and Information Sciences



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## EDUCATION

### Ph.D. Software Engineering

June 2014

North Dakota State University, Fargo, ND

Thesis: "A New Coupling Metric: Combining Structural and Semantic Relationships"

### M.S. Software Engineering

June 2011

DePaul University, Chicago, IL

### B.S. Computer Science

March 2010

Prince Sultan University, Riyadh

## CONSULTANCY and FUNDING EXPERIENCE

### Wisconsin Falconers Association

April 2011

Building a reservation system for visitors. People from around the globe come and visit this association at certain times to visit certain types of birds prey.

### National Information Solutions Cooperative (NISC)

March 2013

Helped them in transforming the billing management system of Walmart to a web service. The aim of the project was to help Branch managers to access utility bills on their mobile devices

### Saudi Telecom Company (STC)

May 2016

A medium-size consultation project between STC and Prince Megren Data Mining Center (MEGDAM). The aim was to reducing repeated calls to improve field operations performance.

### King Abdulaziz City for Science and Technology (KACST)

January 2017

Dynamic Capacity Provisioning in Cloud-Based Network. The aim is to handle the challenge of resource allocation in a cloud-based network. The model will handle advance and online reservation resource requests. (163,200 SAR).

## TEACHING EXPERIENCE

### Gifted High-school Students

2009

Mobile Development using Visual Studio

### Prince Sultan University

2014 to Present

SE 201: Introduction to Software Engineering

SE 211: Software Construction

SE 311: Software Requirements Engineering

SE 322: Software Design & Architecture

SE 353: Building Secure Software Systems

SE 401: Software Quality Assurance & Testing

SE 415: Group Dynamics & Professional Practice

## WORK EXPERIENCE

### Dean of Quality Assurance and Development

Prince Sultan University

Sep 2020 to Present

### Dean of Educational Services

Prince Sultan University

Sep 2018 to Aug 202

### Associate Professor (Department of Computer Science)

Prince Sultan University

Dec 2018 to Present

### Chief Information & Technology Officer

Prince Sultan University

Sep 2016 to Aug 2019

### General Supervisor of Information Technology & Computing Services

Prince Sultan University

March 2016 to Aug 2016

### Chairman of the Department of Computer Science

Prince Sultan University

Sep 2015 to Aug 2016

### Assistant Professor (Department of Computer Science)

Prince Sultan University

Sep 2014 to Dec 2018

#### New Course Development

- SE 211: Software Construction
- SE 311: Software Requirements Engineering
- SE 415: Group Dynamics & Professional Practice

#### Master degree curriculum development

- Participated in development of MS in Software Engineering program
- Participated in development of MS in Cybersecurity Engineering program

#### Service and Administration

- University level Examination Committee
- PSU Institutional Policy Committee
- Institutional Strategic Planning Committee
- ABET Steering Committee
- Institutional Technology and Quality Committee
- Institutional Executive Research Committee

#### Master Thesis Committee

- A Context-Aware Personalization Model for Augmented Reality Applications
- User Experience Dimensions, Aspects, and Measures: Systematic Literature Review
- Software Architecture Stability Evolution in Open Source Object-Oriented Systems

## Sample Publications

### JOURNAL ARTICLES

ISI	Khalid T. Al-Sarayreh, <b>Mamdouh Alenezi</b> , Mohammed Zarour, and Kenza Meridji: "A reference measurement framework of software security product quality (SPQNFSR)." IET Information Security, 2021.
ISI	Mohammad Zarour, <b>Mamdouh Alenezi</b> , Amal Krishna Sarkar, Alka Agrawal, Rajeev Kumar, and Raees Ahmad Khan: "Healthcare Data Breaches: Insights and Implications." Healthcare 2020, 8(2), 133
ISI	Celestine Iwendi, Suleman Khan, Joseph H. Anajemba, Mohit Mittal, <b>Mamdouh Alenezi</b> , Mamoun Alazab: "The Use of Ensemble Models for Multiple Class and Binary Class Classification for Improving Intrusion Detection Systems." Sensors 2020, 20(9), 2559
ISI	Alka Agrawal, <b>Mamdouh Alenezi</b> , Rajeev Kumar, and Raees Ahmad Khan: "Measuring the Sustainable-Security of Web Applications Through a Fuzzy-Based Integrated Approach of AHP and TOPSIS." IEEE Access, Volume 7, pp. 153936 - 153951 November 2019.
Scopus	Alka Agrawal, <b>Mamdouh Alenezi</b> , Rajeev Kumar, and Raees Ahmad Khan: "A source code perspective framework to produce secure web applications." Computer Fraud & Security, Volume 2019, Issue 10, pp. 11 - 18 October 2019.

Scopus	Alka Agrawal, Mohammad Zarour, <b>Mamdouh Alenezi</b> , Rajeev Kumar, and Raees Ahmad Khan: "Security durability assessment through fuzzy analytic hierarchy process." PeerJ Computer Science, 5:e215 September 2019.
Scopus	Alka Agrawal, <b>Mamdouh Alenezi</b> , Dharendra Pandey, Rajeev Kumar, and Raees Ahmad Khan: "Usable-Security Assessment Through A Decision Making Procedure." ICIC Express Letters, Part B: Applications, Volume 10, Number 8, pp. 665 - 672 July 2019.
ISI	Rajeev Kumar, Mohammad Zarour, <b>Mamdouh Alenezi</b> , Alka Agrawal, and Raees Ahmad Khan: "Measuring Security Durability of Software through Fuzzy-Based Decision-Making Process." International Journal of Computational Intelligence Systems, Volume 12, Number 2, pp. 627 - 642 June 2019.
Scopus	Attiqu ur Rehman Jaffar, Muhammad Nadeem, <b>Mamdouh Alenezi</b> , and Yasir Javed: "Using Public Vulnerabilities Data to Self-Heal Security Issues in Software Systems." ICIC Express Letters, Volume 13, Number 7, pp. 557 - 567 July 2019.
Scopus	Alka Agrawal, <b>Mamdouh Alenezi</b> , Suhel Ahmad Khan, Rajeev Kumar, Raees Ahmad Khan: "Multi-level Fuzzy System for Usable-Security Assessment." Journal of King Saud University-Computer and Information Sciences (2019).
Scopus	<b>Mamdouh Alenezi</b> , Muhammad Usama, Khaled Almustafa, Waheed Iqbal, Muhammad Ali Raza, and Tanveer Khan: "An Efficient, Secure, and Queryable Encryption for NoSQL-Based Databases Hosted on Untrusted Cloud Environments." International Journal of Information Security and Privacy (IJISP), Volume 13, Issue 2, pp. 14 - 31 (2019).
Scopus	Md Tarique Jamal Ansari, Dharendra Pandey, and <b>Mamdouh Alenezi</b> : "STORE: Security Threat Oriented Requirements Engineering Methodology." Journal of King Saud University - Computer and Information Sciences (2018).
ISI	Muhammad Abdullah, Saad Khan, <b>Mamdouh Alenezi</b> , Khaled Almustafa, and Waheed Iqbal: "Application Centric Virtual Machine Placements to Minimize Bandwidth Utilization in Datacenters." Intelligent Automation and Soft Computing.
ISI	Iman Almomani and <b>Mamdouh Alenezi</b> : "Efficient Denial of Service Attacks Detection in Wireless Sensor Networks." Journal of Information Science and Engineering Vol. 34, No. 4 (2018), pp. 977 - 1000.
Scopus	<b>Mamdouh Alenezi</b> , Khaled Almustafa and Khalim Amjad Meerja: "Cloud based SDN and NFV architectures for IoT infrastructure." Egyptian Informatics Journal (2018).
Scopus	<b>Mamdouh Alenezi</b> , Khaled Almustafa and Mohamed Hussein: "On Virtualization and Security-Awareness Performance Analysis in 5G Cellular Networks." Journal of Engineering Science and Technology Review Vol. 11, No. 1 (2018), pp. 199 - 207.
Scopus	Thamer Alhamed and <b>Mamdouh Alenezi</b> : "Business Continuity Management & Disaster Recovery Capabilities in Saudi Arabia ICT Businesses." International Journal of Hybrid Information Technology Vol. 9, No. 11 (2016), pp. 99-126.
Scopus	<b>Mamdouh Alenezi</b> , "Software Architecture Quality Measurement Stability and Understandability." International Journal of Advanced Computer Science and Applications(IJACSA), Volume 7 Issue 7, pp. 550-559 (2016)
ISI	Ibrahim Abunadi and <b>Mamdouh Alenezi</b> : "An Empirical Investigation of Security Vulnerabilities within Web Applications." Journal of Universal Computer Science Vol. 22, No. 4, pp. 537-551 (2016).
Scopus	<b>Mamdouh Alenezi</b> and Fakhry Khellah. "Evolution Impact on Architecture Stability in Open-Source Projects." International Journal of Cloud Applications and Computing (IJCAC) 5.4 (2015): 24-35.
Scopus	<b>Mamdouh Alenezi</b> and Khaled Almustafa: "Empirical Analysis of the Complexity Evolution in Open-Source Software Systems" International Journal of Hybrid Information Technology (IJHIT), Vol.8, No.2, 2015.
Scopus	<b>Mamdouh Alenezi</b> and Kenneth Magel: "Empirical Evaluation of A New Coupling Metric: Combining Structural and Semantic Coupling." International Journal of Computers and Applications 36(1) (2014).

## CONFERENCE PROCEEDINGS

ACM	Wajdi Aljedaani, Yasir Javed, and <b>Mamdouh Alenezi</b> : "LDA Categorization of Security Bug Reports in Chromium Projects." ESSE 2020 : European Symposium on Software Engineering, November 2020, Pages 154–161, Roma, Italy
ACM	Wajdi Aljedaani, Yasir Javed, and Mamdouh Alenezi: "Open Source Systems Bug Reports: Meta-Analysis." ICBDE '20: Proceedings of the 2020 The 3rd International Conference on Big Data and Education, April 2020, Pages 43–49
Springer	Mohammad Zarour, <b>Mamdouh Alenezi</b> , Maurice Dawson, and Izzat Alsmadi: "Toward Effective Cybersecurity Education in Saudi Arabia." 17th International Conference on Information Technology–New Generations (ITNG 2020), April 2020 Pages 79-85.
ACM	Mohammad Zarour, <b>Mamdouh Alenezi</b> , Khalid Alsarayrah: "Software Security Specifications and Design: How Software Engineers and Practitioners Are Mixing Things up." EASE '20: Proceedings of the Evaluation and Assessment in Software Engineering, April 2020 Pages 451–456.
ACM	<b>Mamdouh Alenezi</b> , Hamid Abdul Basit, Faraz Idris Khan, Maham Anwar Beg: "A Comparison Study of Available Software Security Ontologies." EASE '20: Proceedings of the Evaluation and Assessment in Software Engineering, April 2020 Pages 499–504.
Springer	<b>Mamdouh Alenezi</b> and Faraz Idris Khan: "Context-Sensitive Case-Based Software Security Management System." 3rd Computational Methods in Systems and Software 2019.
Springer	<b>Mamdouh Alenezi</b> and Iman Almomani: "Empirical Analysis of Static Code Metrics for Predicting Risk Scores in Android Applications." 5th International Symposium on Data Mining Applications (SDMA2018), Riyadh, Saudi Arabia.
IEEE	<b>Mamdouh Alenezi</b> and Iman Almomani: "Abusing Android Permissions: A Security Perspective." 2017 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT), Amman, Jordan.
Elsevier	Khaled Almustafa and <b>Mamdouh Alenezi</b> : "Cost Analysis of SDN/NFV Architecture over 4G Infrastructure." The 8th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN-2017), Lund, Sweden.
IEEE	<b>Mamdouh Alenezi</b> , Mohammed Akour, Alaa Hussien, and Mohammad Z. Al-Saad: "Test Suite Effectiveness: An Indicator for Open Source Software Quality." The 2nd International Conference on Open Source Software Computing (OSSCOM 2016), Beirut, Lebanon
IEEE	<b>Mamdouh Alenezi</b> and Yasir Javed: "Open Source Web Application Security: A Static Analysis Approach." International Conference on Engineering & MIS 2016 (ICEMIS'16), Agadir, Morocco.
Elsevier	Yasir Javed and <b>Mamdouh Alenezi</b> : "Defectiveness Evolution in Open Source Software Systems." 4th Symposium on Data Mining Applications (SDMA 2016), Riyadh, Saudi Arabia.
IEEE	Khaled Almustafa and <b>Mamdouh Alenezi</b> : "Dynamic Evolution of Source Code Topics." The Tenth International Conference on Software Engineering Advances (ICSEA 2015), Barcelona, Spain.
ACM	Ibrahim Abunadi and <b>Mamdouh Alenezi</b> : "Towards Cross Project Vulnerability Prediction in Open Source Web Applications." International Conference on Engineering & MIS 2015 (ICEMIS'15), Istanbul, Turkey.
ACM	<b>Mamdouh Alenezi</b> and Mohammad Zarour: "Modularity Measurement and Evolution in Object-Oriented Open-Source Projects." International Conference on Engineering & MIS 2015 (ICEMIS'15), Istanbul, Turkey.
ACM	<b>Mamdouh Alenezi</b> and Fakhry Khellah: "Architectural Stability Evolution in Open-Source Systems." International Conference on Engineering & MIS 2015 (ICEMIS'15), Istanbul, Turkey.
IEEE	<b>Mamdouh Alenezi</b> , Shadi Banitaan, and Qasem Obeidat: "Fault-Proneness of Open Source Systems: An Empirical Analysis." International Arab Conference on Information Technology (ACIT 2014), Nizwa, Oman.

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## Services

### Conference Chair

- 5th International Symposium on Data Mining Applications (SDMA2018)
- 6th International Conference on Data Science and Machine Learning Applications (CDMA 2020)

### Program Committee Membership

- Workshop on Machine Learning for Predictive Models (MLPM 2014), 13th IEEE International Conference on Machine Learning and Applications (ICMLA 2014).
- International Conference on Computing and Informatics (ICOCI 2015).
- The Third Information Systems International Conference (ISICO 2015).
- The Tenth International Conference on Software Engineering Advances (ICSEA 2015).
- International Conference on Computing Education and Information Technology (ICCEIT 2015).
- Workshop on Machine Learning for Predictive Models in Engineering Applications (MLPMEA 2015), 14th IEEE International Conference on Machine Learning and Applications (ICMLA 2015).
- International Conference on Computing Education and Information Technology (ICCEIT 2015).
- The 7th International Conference on Information and Communication Systems (ICICS 2016).
- The 4th Symposium on Data Mining Applications (SDMA 2016).
- The 4th Saudi International Conference on Information Technology, Big Data Analysis (KACSTIT2016).
- The Eleventh International Conference on Software Engineering Advances (ICSEA 2016).
- Special Session: Machine Learning for Predictive Models in Engineering Applications, The 18th IEEE International Conference on Machine Learning and Applications (ICMLA 2019).

### Reviewer of International Indexed Journals

- International Journal of Cloud Applications and Computing (IJCAC).
- KSII Transactions on Internet and Information Systems.
- Journal of Ambient Intelligence and Humanized Computing.
- International Journal of Software Engineering and Knowledge Engineering.
- Information and Software Technology.
- Journal of Information Security and Applications.
- ACM Computing Surveys.

### Master Students Supervision

- Hussain Alshehri - Internet of Things - Architecture of Multiple Sources Data Acquisition Sensors
- Sultan Alotaibi - An exploratory study of DevOps Awareness and Adoption in Saudi Arabia
- Abdulrahman Asiri - Cloud-based Cross-enterprise Imaging Framework
- Thamer Alhamed - Measuring the Capability of Business Continuity Management & Disaster Recovery in the Kingdom of Saudi Arabia ICT Companies
- Turki Alshammary - Software Architecture Understandability in Object-Oriented Systems
- Hassan Al-Mousa - Software Architecture Stability Evolution in Open Source Object-Oriented Systems
- Laila Al-Rowais - Framework for Security Testing of Web Applications
- Khawlah AlOmar - Static Analysis of Open-Source Web Applications