Khaled Alrawashdeh, Ph.D.

Irbid-Jordan
PHONE: 929-507-6888
alrawakm@mail.uc.edu

Education

2014 – 2018 **Ph.D.,University of Cincinnati, Cincinnati, U.S.A** in Computer Science and Engineering. **GPA: 3.84**
Thesis title: *Toward a Hardware-assisted online Deep Learning Training Algorithms for Intrusion Detection System for Resource-limited Embedded Systems.*

2006 – 2008 **M.Sc. Computer Science, Florida Institute of Technology, Florida, U.S.A. GPA: 3.65.** In Advancing multi-process and multi-thread approaches for sorting algorithms.
Thesis title: *Comparative Analysis of the Impact of Multi-thread and Multi-process Approaches to Minimize Computation Loads of Sorting Algorithms*.

2006 – 2007 **M.SE. Computer Engineering, Florida Atlantic University, Florida, U.S.A** Software Engineering challenges for critical systems. (Degree pending final project- Didn't graduate).

1997 – 2000 **B.Sc. Computer Science, New Jersey City University, Jersey City, U.S.A**

Research Interests

Intrusion Detection System, Machine Learning, Neural Network, Transfer Learning, Cyber Security, Intrusion Detection, Big Data, Data science, Wireless Sensor Networks, Computer Networking .

Employment History

2023 – Present **Assistant Professor in Cybersecurity Department.** Jordan University of Science and Technology, Irbid, Jordan.

2022 – 2023 **Assistant Professor Computer Science.** Oklahoma City University, Oklahoma City, OK.

- Taught courses
  - CSCI6123: CLOUD SECURITY (Graduate)
  - CSCI6113: CRYPTOGRAPHY (Graduate)
  - CSCIS6123: Offensive Coding (Graduate)
  - CSCIS6221: Defensive Coding (Graduate)

Employment History (continued)

2019 – 2022 **Assistant Professor Computer Science.** Avila University, Kansas City, MO.

- Taught courses
  - CS166: Introduction to Object Oriented Programming in Java (Undergraduate)
  - CY301: Introduction to Cybersecurity (Undergraduate)
  - CY305: Network Security (Undergraduate)
  - CY310: Ethical Hacking (Undergraduate)
  - CS314: Advanced Object Oriented Programming in Java (Undergraduate)
  - CS325: Computer Networking (Undergraduate)
  - CS245: Assembly Language (Undergraduate)
  - SF201: Introduction to Software Engineering (Undergraduate)
  - CS225: Secure Programming (Undergraduate)
  - CS499: CS Capstone Project (Undergraduate)
  - CY360: Digital Forensic
  - CY340: Principal of Cryptography
  - CY330: Firewalls and E-Commerce Security

2015 – 2018 **Network Engineering Consulting.** Information Technology Infrastructure Management, NSC Global, ATOS IT Infrastructure, Xerox, Inc, and Conduent, Inc. Remote locations in Ohio, Texas, California, and New York.

2009 – 2013 **Automation Engineer.** The coca Cola company, Florida, U.S.A.

2007 – 2008 **Lecturer.** Computer Science Department, Florida Institute of Technology, Florida, U.S.

2005 – 2006 **System Engineer.** The coca Cola company, Florida, U.S.A.

2000 – 2004 **System Administrator.** The Record Media Group, Hackensack, New Jersey, U.S.A

Research Publications

Conference proceeding

1. Alrawashdeh, K., & Purdy, C. (2018a). Fast Activation Function Approach for Deep Learning Based Online Anomaly Intrusion Detection . *2018 IEEE 4th International Conference on Big Data Security on Cloud (BigDataSecurity), IEEE International Conference on High Performance and Smart Computing (HPSC), and IEEE International Conference on Intelligent Data and Security (IDS)*.

2. Alrawashdeh, K., & Purdy, C. (2018b). Improve training of deep belief network using dynamic activation function for online anomaly detection applications. *Large-scale Learning from Data Streams in Evolving Environments. Submitted to Springer*.

3. Arawashdeh, K., & Purdy, C. (2018a). Ransomware Detection Using Limited Precision Deep Learning Structure in FPGA. *Aerospace and Electronics Conference (NAECON), 2018 IEEE National*, 57–62.
4. Arawashdeh, K., & Purdy, C. (2018b). Fast Hardware Assisted Online Learning Using Unsupervised Deep Learning Structure for Anomaly Detection. *International Conference on Information and Computer Technologies (ICICT 2018)*.
5. Lockhart. J, K., Arawashdeh, & Purdy, C. (2018). Verification of Random Number Generators for Embedded Machine Learning. *Aerospace and Electronics Conference (NAECON), 2018 IEEE National*, 57–62.
6. Alrawashdeh, K., & Purdy, C. (2017). Reducing calculation requirements in FPGA implementation of deep learning algorithms for online anomaly intrusion detection. *Aerospace and Electronics Conference (NAECON), 2017 IEEE National*, 57–62.
7. Alrawashdeh, K., & Purdy, C. (2016). Toward an Online Anomaly Intrusion Detection System Based on Deep Learning. *2016 IEEE 15th International Conference on Machine Learning and Application (ICMLA)*, *9*(5).

Conference Presentation

1. Alrawashdeh, K., & Purdy, C. (2018a). Fast Activation Function Approach for Deep Learning Based Online Anomaly Intrusion Detection . *2018 IEEE 4th International Conference on Big Data Security on Cloud (BigDataSecurity), IEEE International Conference on High Performance and Smart Computing (HPSC), and IEEE International Conference on Intelligent Data and Security (IDS)*.
2. Alrawashdeh, K., & Purdy, C. (2018b). Improve training of deep belief network using dynamic activation function for online anomaly detection applications. *Large-scale Learning from Data Streams in Evolving Environments. Submitted to Springer*.
3. Arawashdeh, K., & Purdy, C. (2018a). Ransomware Detection Using Limited Precision Deep Learning Structure in FPGA. *Aerospace and Electronics Conference (NAECON), 2018 IEEE National*, 57–62.
4. Arawashdeh, K., & Purdy, C. (2018b). Fast Hardware Assisted Online Learning Using Unsupervised Deep Learning Structure for Anomaly Detection. *International Conference on Information and Computer Technologies (ICICT 2018)*.
5. Lockhart. J, K., Arawashdeh, & Purdy, C. (2018). Verification of Random Number Generators for Embedded Machine Learning. *Aerospace and Electronics Conference (NAECON), 2018 IEEE National*, 57–62.
6. Alrawashdeh, K., & Purdy, C. (2017). Reducing calculation requirements in FPGA implementation of deep learning algorithms for online anomaly intrusion detection. *Aerospace and Electronics Conference (NAECON), 2017 IEEE National*, 57–62.
7. Alrawashdeh, K., & Purdy, C. (2016). Toward an Online Anomaly Intrusion Detection System Based on Deep Learning. *2016 IEEE 15th International Conference on Machine Learning and Application (ICMLA)*, *9*(5).

Paper Reviews

- [2018] **Reviewer for the IEEE Access Journal.** (http://ieeeaccess.ieee.org/), 2018.

Paper Reviews (continued)

- [2018] **Reviewer for the Springer Journals Editorial Office for the Frontiers of Information Technology and Electronic Engineering journal.** (https://www.springer.com/computer/journal/11714), 2018.

- [2018]**Reviewer and international program committee member for the (IEEE Big Data 2018)) conference, International Workshop on Big Data Analytics for Cyber Intelligence and Defense (BDA4CID 2018). 2018 IEEE International Conference on Big Data (IEEE Big Data 2018) December 10-13, 2018**. (http://siwn.org.uk/events/bda4cid/), 2018.

- [2017] **Reviewer for the (MWSCAS) conference, 2017 IEEE 60th International Midwest Symposium on August 6th, 2017. IEEE, 2017**.

- [2017] **Committee member and reviewer of the Springer Book "Large-scale Learning from Data Streams in Evolving Environments. Springer"**.
- [2020] **Elsevier Journal:** Engineering Science and Technology, an International Journal.
- [2020] **ACM Transactions on Reconfigurable Technology and Systems.**

Skills

Languages Coding	Java, PHP, Python, R, SQL, XML/XSL, LaTeX, ASP.NET, Visual Basic.NET, C#.NET, LotusScript, Prolog, Verilog, FPGA, and ASIC Programming.
Databases	MySQL, PostgreSQL, HSQL, SQLite, LotusNotes.
Web Dev	HTML, CSS, JavaScript, Apache Web Server, Tomcat Web Server.
Misc.	Academic research, teaching, training, consultation, LaTeX typesetting and publishing.

Awards and Certificates

2018 **Best Demo Award, the paper titled "Fast Activation Function Approach for Deep Learning Based Online Anomaly Intrusion Detection"** received best demo award from the technical committee of the conference Big Data Security on Cloud (BigDataSecurity), IEEE International Conference on High Performance and Smart Computing (HPSC), and IEEE International Conference on Intelligent Data and Security (IDS), 2018, Omaha, U.S.A.

2017 **Highest Performance Level IT Practitioner**. Awarded by NSC Global IT Infrastructure, U.S.A.

2018 **Certified IT Professional for (Support Networks for Major IT clients)**. Awarded by ATOS IT Infrastructure, U.S.A.

References

1. Prof. Carla Purdy. purdycc@ucmail.uc.edu
2. Prof. Bilal Gonen. bilal.gonen@ uc.edu
3. Prof. Ali Minai. ali.minai@ uc.edu