Curriculum Vitae

KHALED WALID MAHMOUD
PH.D. IN PRINT SECURITY AND DIGITAL WATERMARKING,
LOUGHBOROUGH UNIVERSITY, UK, 2004.

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Computer and Information Science/ Information Security
Academic Rank: Assistant Professor

Short Biography

Khaled W. Mahmoud got his BSc in Computer Science from Jordan University in June 1992, an MSc in Computer Science (Artificial Intelligence) from Jordan University in 1998, and a PhD in Print Security and Digital Watermarking from Loughborough University (UK) in 2004. This was followed by academic appointments at ZARQA Private University as an assistant professor of computer science. In 2018, he joined Princess Sumaya University as an academic staff in the computer science department. His areas of interest include information security, digital watermarking, image forgery detection, machine learning, deep learning deepfake detection, AI, and Arabic language processing.

Personal Information

Place and Date of Birth	Kuwait: 14/11/1969
Nationality	Jordanian
Marital Status	Married
Address	Al-Akhdar Mountain, Amman, Jordan
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Postal Address	P.O.Box 1438 Al-Jubaiha - Amman, 11941 Jordan
Languages (spoken-written):	Arab(Mother tongue), English(Good - Good).

Philosophy
1. To establish myself in the field of education,
2. To utilize my skills and experience to help students to achieve high improvements in academics.
3. To work on critical research work/studies in an institution that provides professional development, interesting experiences, and personal growth.

Interests
Information security, digital watermarking, image forgery detection, machine learning, deep learning deepfake detection, AI, and Arabic language processing

Qualifications

1.	**Ph.D**. in Print Security and Digital Watermarking, at Loughborough University, UK (2004). **Thesis**: Low-Resolution Watermarking for Print Security; **Supervisor**: Prof. Jonathan Blackledge.
2.	**Master's** Degree in Computer Science (1998) at the University of Jordan (3.62 - 4). **Specialization**: Truth Maintenance System (TMS), Production Rule-based System.
3.	**B.Sc** in Computer Science at Jordan University (1992) (82.9%).
4.	**High School** at Kuwait (1987) (93.6%).

Teaching Experience

#	From	To	
1	19/9/92	16/10/93	Teaching in the Arab Community College, Amman.
2	1/12/93	1/12/95	Lab Supervisor and Oracle Programmer in "Princess Sumaya College," Royal Scientific Society (RSS), Jordan.
3	20/10/96	1/10/98	Programmer (VB and Internet) in "National Library," Ministry of Culture, Jordan.
4	1/10/98	31/8/18	Assistant professor at computer science department, Zarqa University (ZU), Jordan.
5	16/9/18	Now	Assistant professor at the computer science and cyber security department, Princess Sumaya University (PSUT)

Management experience

#	From	To	
1	2008	2010	Head of Department: Software Engineering and Computer Information Systems at ZU University
2	2013	2015	Vice Dean of IT College at ZU University

Computer's Language Knowledge and OS
- Python
- VB, VB.Net, Java, VC++, C#, C++
- FoxPro, Oracle,

- HTML, ASP, VBScripts, JavaScript, PHP
- Lisp, Prolog, Matlab.
- UNIX/LINUX, Windows

Courses That I Taught

1. **BSc Courses:**
   - Multimedia Security
   - Data Structure.
   - Computer Algorithm: Design and Analysis (BSc and MSc)
   - Digital Image Processing
   - Intelligent Threat Detection (Machine Learning)
   - Python programming.
   - Neural Nets.
   - Operating Systems.
   - Information Security
   - Artificial Intelligence
   - Object Oriented Programming
   - Expert Systems.
   - Fundamentals of Multimedia
   - Databases.
   - Web Programming.
   - Java Programming.
   - Visual Programming.
   - Programming-2.
   - Programming-1.
   - Management Information System.
   - Computer Applications.
   - Introduction to Computer Science.
   - Discrete Mathematics

2. **Master Courses:**
   - Digital Image Processing
   - Algorithms
   - Multimedia Security
   - Distributed Operating system
   - Information Security
   - Encryption.

Training Courses

- 15/10/94- 28/12/94   Database Design & Programming using Oracle, RSS.
- 30/08/97- 03/09/97   Programming using HTML, RSS.
- 06/09/97- 10/09/97   Using Internet, RSS.
- 13/02/00- 17/02/00   PC Assembling & Troubleshooting, ZU.
- 19/09/99- 29/09/99   Java Programming, ZU.
- 02/09/12- 13/09/12   Project Management (40 Hs), Method.

Supervision: Master and Phd students

#	Year	University	Thesis Title	Student Name
1.	8/2015	Zarka university	An improved method for detecting copy-move forgery in digital images **(Msc)**	Fatimah Himour
2.	12/2015	Zarka university	A Robust method for Move-Copy forgery Detection **(Msc)**	Arwa H. Abu-AlRukab
3.	2016	Zarka university	Detecting password Hacking and System Breach Attempts **(Msc)**	Ala'a Makableh
4.	2010	Bradford university	Innovative Location based scheme for internet Security Protocol, Bradford University **(Phd)**	Abdelmajid, Nabih T
5.		De Montfort University	Image-based road sign recognition **(Phd)**	Akram AbdelQader
6.	2018-2017	Zarka University	2D geometric shapes password authentication mechanism **(Msc)**	Bilal Eid Abtan
7.	2018-2019	PSUT	Threat Hunting: Web Application Backdoor	Shatha Shakhatreh
8.	2018-2019	PSUT	Android Malware Detection Based on Abnormal Network Traffic using CICAndMal2017 dataset	Mohammad K. Abuthawabeh
9.	2020-2021	PSUT	Distinguish between the original region and the falsified region in images altered by copy-move forgery.	سائد يعقوب جريس اسعيد

Selected BSc Projects

1. Digital Image Watermarking, Mohammed Wael , 2005/2006
2. Face Recognition Using Holistic Approach: EigenFaces, Mustafa Mohammed, 2005/2006, Ahmad almugraby , 2012
3. Isolated Word Recognition using Hidden Markov Model and LPC Feature Extraction: Essam Badwan, 2008-2009.
4. Speaker Verification using K-Means, Jihad AlKholy, 2008-2009.
5. Jordanian Vehicle License Plate Recognition System, Fatima Himour 2009-2010.
6. Recognition of online handwritten Arabic characters, Tasnim Abu-Sharkh, 2012
7. Maze Solver using arduino, Osama Safi and Alrawi, 2018
8. Deepfake detection using deep learning and transfer learning (2023)
9. Robust and secure steganography (2023)

Msc Thesis Discussion

1. Amneh Alamleh, Network Intrusion Classification using Data Mining Techniques, 8/2015, Computer Science Department, Zarqa University.
2. Enas Ayman Al-Etrakjy, Building an Intrusion Blacklist Using Similarity Measurements, 1/2016, Computer Science Department, Zarqa University.
3. Sajjad AlrobayMulti-Model Keystroke Dynamics, 1/2016, Computer Science Department, Middle East University.
4. Sana Himour, Proactive evidence Preserving Model for Cybercrime Using Encryption, 5/2016 , Computer Science Department, Zarqa University.
5. Seham Himour, An analysis and Improvment of Arabic offline Handwriting Recognition, 12/2016 , Computer Science Department, Zarqa University.
6. Ahmed J. Alqam, Lossy Image Compression using Multi-Model Stacked AutoEncoder, 3/2021, Computer science department, PSUT.

Books

#	Book Title	Publisher	Year
1.	The Computer, For High School Inclusive	The Ministry of Education, Jordan	2002
2.	The Computer, For Secondary School	The Ministry of Education, Jordan	2004
3.	Computer, Secondary School	Ministry of Education, Jordan	2006

Journal Papers and conferences

[1] **K. W. Mahmoud**, "A study of the efficiency of tms-based production rule system," Master's thesis, Jordan University, 1997.

[2] **K. W. Mahmoud**, J. M. Blackledge, S. Datta, and J. A. Flint, "Print protection using high-frequency fractal noise," in *Security, Steganography, and Watermarking of Multimedia Contents VI*, vol. 5306, pp. 446–455, International Society for Optics and Photonics, 2004.

[3] **K. W. Mahmoud**, *Low Resolution Watermarking for Print Security*. PhD thesis, Loughborough University, 2004.

[4] **K. W. Mahmoud**, J. M. Blackledge, S. Datta, and J. A. Flint, "Print protection using a diffused background watermark," in *ACIT2004 – 5th Inter- national Arab Conference on Information Technology*, pp. 627–634, 2004.

[5] **K. W. Mahmoud**, S. Datta, and J. A. Flint, "Frequency domain water- marking: An overview.," *Int. Arab J. Inf. Technol.*, vol. 2, no. 1, pp. 33–47, 2005.

[6] N. Abdelmajid, H. Alamgir, S. Simon, and **K. Mahmoud**, "' where you are?' based authentication: An improved security protocol using ban logic," in *The 7th European Conference on Information Warfare and Security*, University Of Plymouth, (UK), 2008.

[7] J. Blackledge and **M. Khaled**, "Printed document authentication using texture coding," *ISAST Transaction on Electronics and Signal Processing*, vol. 4, no. 1, pp. 81–98, 2009.

[8] N. T. Abdelmajid, M. A. Hossain, S. Shepherd, and **K. Mahmoud**, "Location-based kerberos authentication protocol," in *SocialCom 2010: 2nd IEEE International Conference on Social Computing, PASSAT 2010: 2nd IEEE International Conference on Privacy, Security, Risk and Trust*, pp. 1099– 1104, IEEE, 2010.

[9] N. T. Abdelmajid, M. A. Hossain, S. Shepherd, and **K. Mahmoud**, "Improved kerberos security protocol evaluation using modified ban logic," in *2010 10th IEEE International Conference on Computer and Information Technology (CIT 2010)*, pp. 1610–1615, IEEE, 2010.

[10] A. N T and **M. Khaled**, "Global position system location-based authentication (kerberos as an example)," *International Journal of Information Technology and Electrical Engineering*, vol. 5, no. 3, pp. 13–18, 2016.

[11] **K. W. Mahmoud** and A. H. A. Al-Rukab, "Moment based copy move forgery detection methods," *International Journal of Computer Science and Information Security*, vol. 14, no. 7, pp. 28–35, 2016.

[12] **K. Mahmoud** and A. Abu-AlRukab, "Copy-move forgery detection using zernike and pseudo zernike moments," *The International Arab Journal of Information Technology (IAJIT)*, vol. 13, no. 6A, pp. 930–937, 2016.

[13] **K. W. Mahmoud**, "Elastic password: A new mechanism for strengthening passwords using time delays between keystrokes," in *2017 8th International Conference on Information and Communication Systems (ICICS)*, vol. 8, Jordan University of Science and Technology, 2017.

[14] **K. W. Mahmoud**, K. Mansour, and A. Makableh, "Detecting password file theft using predefined time-delays between certain password characters," *Journal of Telecommunications and Information Technology*, vol. 4, pp. 101–108, 2017.

[15] B. E. Fayyadh, K. Mansour, and **K. W. Mahmoud**, "A new password authentication mechanism using 2d shapes," in *The International Conference on Computer Science and Information Technology (CSIT 2018)*, vol. 8, Applied Science University (Jordan), 2018.

[16] M. K. Abuthawabeh and **K. W. Mahmoud**," Android Malware Detection and Categorization Based on Conversation-level Network Traffic Features" in *The International Arab Conference on Information Technology (ACIT 2019)*, AL Ein University (UAE), 2019.

[17] M. Abuthawabeh. and **K. W. Mahmoud**, "Enhanced android malware detection and family classification, using conversation-level network traffic features," The International Arab Journal of Information Technology, vol. 17, no. 4A, pp. 607-614, 2020.

[18] K. Mansour. and **K. Mahmoud**, "A new approach for textual password hardening using keystroke latency times," The International Arab Journal of Information Technology, vol. 18, no. 3, pp. 336-346 May, 2021.

[19] M. Abutaha, M. Ababneh, **K. Mahmoud** and S. A. -H. Baddar, "URL Phishing Detection using Machine Learning Techniques based on URLs Lexical Analysis," 2021 12th International Conference on Information and Communication Systems (ICICS), 2021, pp. 147-152, doi: 10.1109/ICICS52457.2021.9464539.

[20] Iseed, S.Y., Mahmoud, K.W. Forensic approach for distinguishing between source and destination regions in copy-move forgery. Multimed Tools Appl 82, 31181–31210 (2023).

https://doi.org/10.1007/s11042-023-14824-0

[21]   O. Alkhasawneh and K. W. Mahmoud, "Deep Learning - An Investigation on Fire and Fire's Losses Detection Using YOLOv5," 2023 24th International Arab Conference on Information Technology (ACIT), Ajman, United Arab Emirates, 2023, pp. 1-6, doi: 10.1109/ACIT58888.2023.10453766.

Community service

- Editorial Board: International Arab Journal for Information Technology (IAJIT)

- Reviewer: International Arab Conference on Information Technology (ACIT)

- Reviewer: International Arab Journal for Information Technology (IAJIT)