**Mohammad I. Malkawi**

*Associate Professor, Jordan University of Science and Technoogy*

*CEO, Counterfeit Combat Technology USA*

*Adjunct Professor at Argosy University – Chicago*

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**PERSONAL:**

* Holds a Ph.D. in Electrical and Computer Engineering from University of Illinois at UC
* Married
* US Citizen
* Excellent communication skills
* Languages: English, Arabic, Russian
* Available: August 2017

**EDUCATION:**

* Ph.D. Computer Science, University of Illinois at Urbana-Champaign, 1986.
  + Thesis title: Compiler Directed Memory Organization and Management
  + Funded by JSEP Grant
* MS. Computer Engineering, Yarmouk University
* BS. Computer Engineering, Tashkent Polytechnic Institute

**ACADEMIC EXPERIENCE:**

1986-1992 Assistant Professor University of Wisconsin-Milwaukee.

2006-2007 Visiting Research Scientist at University of Illinois at Urbana Champaign.

2008-Present Adjunct Professor at Argosy University, Chicago USA.

2010-2012 Dean of Engineering at Jadara University - Jordan

2014-present Associate Professor at Jordan University of Science and Technology

**FUNDING EXPERIENCE:**

1. NSF research grant ($60,000), 1988-1990 – High performance computing
2. Jordan University of Science and Technology grant: 2014-2016 ($40,000)
3. Abdulhameed Shoman Foundation, 2016 ($21,000).
4. Bugshan Foundation, Saudi Arabia, 2014-2016 ($150,000).

**TEACHING EXPERIENCE:**

I have taught many courses at the undergraduate and graduate levels including

*Computer architecture, distributed systems, algorithms, operating systems. Formal methods and automata theory, advanced compiler design, client server technology, high performance computing, parallel languages, expert systems, performance evaluation and monitoring, and others*

**INDUSTRIAL EXPERIENCE:**

* *Counterfeit Combat Technology (Founder), USA;* 2014- Now.
* *Human Emotion Detection Using Biometrics and Adaptive Learning Technology 2014-Now*
* *Cambium Networks USA: Senior Wireless Broadband System Architect*; ***2012 - 2014***
* *SUN Microsystems: Senior system architect* ***2004-2008***
* *Motorola Inc.: Senior member of technical staff;* ***1999-2004***
* *SPRINT PCS: Consultant 2004-2010*
* *Jordan University of Science and Technology: Director of IT;*
* *Petroleum Refinery Company in Jordan: 1992-1998*

**BUISNESS EXPERIENCE**

* Founder and Principal Investigator of Counterfeit Combat Technology, USA
* Founder and Principal Investigator of Human Emotion Detection Using Biometrics and Adaptive Learning Technology
* Co-Founder BlueSky Telecomm Inc. Minnesota, USA

**REFERENCES:**

1. Ravi Iyer, University of Illinois at Urbana-Champaign; 217-333-6201, [iyer@crhc.uiuc.edu](mailto:iyer@crhc.uiuc.edu)
2. Dr. Lawrence Votta; (650) 786-7514, [votta@alum.mit.edu](mailto:votta@alum.mit.edu)
3. Professor J. Patel; University of Illinois at Urbana-Champaign 217-333-6201, [patel@crhc.uiuc.edu](mailto:patel@crhc.uiuc.edu)

**PUBLICATIONS:**

1. Performance Measure of a Human Emotion Detection Method Using Optimal Set of vital Physiological Factors, Submitted for phublication to “Computers in Human Behavior”, November, 2016
2. The Detection of Security Threat Level by Analyzing Certain Human Emotions Using Neuro-Fuzzy Techniques, IEEE Technically Sponsored Intelligent Systems Conference (IntelliSys) 7-8 September 2017, London, United Kingdom.
3. An Optimization Method Using Clustering Technique for the Human Emotions Detection Artificial Neuro-Fuzzy Logic System Omayya Murad · Mohammed Malkawi , International Journal of Computers & Technologym Vol. 15m Number 9, ISSN 2277-3061, May 2016
4. A NOVEL OPTIMIZATION ALGORITHM TO DETECT HUMAN EMOTIONS USING ARTIFICIAL INTELLIGENCE TECHNIQUES,  International Business Information Management Association (IBIMA), Amsterdam, May 2015
5. A HIERARCHICAL SUGENO-MAMDANI ANFIS MODEL FOR SOLVING COMPLEX SYSTEMS , 26th, IBIMA conference, Madrid, Spain Abeer I. Albashiti · Mohammad Malkawi · Mohammed Khasawneh , Conference Paper · Nov 2015
6. Architectural Framework For Decision Support for Connectivity and Mobility on Roads and Vehicles Using Fuzzy Logic and Neural Networks,  Conference: 26th, IBIMA, Madrid, Spain, November 2015
7. “The art of software systems development: Reliability, Availability, Maintainability, Performance (RAMP)”, Journal of Human-centric Computing and Information Sciences 2013, **3**:22  doi:10.1186/2192-1962-3-22, Published: 21 December 2013
8. “Artificial Neuro Fuzzy Logic System for Detecting Human Emotions”, Journal of Human-centric Computing and Information Sciences, 2013, 3-3, DOI: 10.1186/2192=1962-3-3, URL: <http://www.hcis-journal.com/content/3/1/3> (also appeared in the proceedings of the 2012 International Conference on Computer, Information, and Telecommunication Systems, **CITS 2012)**.
9. “A Localized Navigation Algorithm for Radiation Evasion for Nuclear Facilities; Optimizing the “Nearest Exit” Criterion; Part I”*;* Nuclear Engineering & Design Journal by Elsevier, 2011
10. “Maximum Clique Conformance Measure for Graph Coloring Algorithms”, submitted to *Journal of Graph Theory*, 2011
11. “Empirical Data and Analysis of Defects in Operating Systems Kernels”, submitted to Elseiver Journal of Systems and Software, 2011
12. “Inward Strategy: An Optimal Solution to Build a New Software Industry in Saudi Arabia”, *14th IBIMA Conference”, Istanbul*-Turkey, June 23-24, 2010 – Republished in *IBIMA Business Review Journal, Vol. 2011 (2011), Article ID 126226, 16 pages*

# “Memory Leak Masking Using Dual Heap Organization”, submitted to *IEEE Transaction on Software Engineering,*

1. “A Novel Run-Time Memory Leak Detection and Recovery (MLDR) Using Aging in Physical Memory Space”, *International Journal on Computers and Network Security, Vol. 2, No. 5, May 2010*
2. “Empirical Data and Analysis of Defects in Operating Systems Kernels”, submitted to International Journal on Computers and Network Security, 2010
3. *“Coloring of Triangle Free Girth Graphs with Minimal k-Colors”, International Journal on Computers and Network Security, Vol. 2, No. 5, May 2010*
4. “Technologies that can Enforce the Nuclear Safeguard Regime”, *Proceedings of the 1st International Nuclear and Renewable Energy Conference (INREC10), Amman, Jordan, March 21-24, 2010 (accepted for publication at* the *Nuclear Engineering and Design Journal*
5. “Modeling and Simulation of a Robust e-Voting System*”, 11th IBIMA Conference on Innovation and Knowledge Management”,* Cairo-Egypt, January 3-6 2009
6. “Modeling and Simulation of a Robust e-Voting System*”, Communications of the IBIMA, 2009, Volume 8, number 26, pages 198-206*
7. “An Orthogonal Method for Evaluating Security Levels, Measures and Deficiencies”, *11th IBIMA Conference on Innovation and Knowledge Management”,* Cairo-Egypt, January 3-6 2009
8. *A graph-Coloring –Based Navigational Algorithm for Personnel Safety in Nuclear Applications”, Proceeding of the 6th International Symposium on Mechatronics and its Applications (ISMA09),* Sharjah, UAE, Mar 23-26, 2009
9. “A security-embedded infrastructure for Tele-Traffic Speed Control”, *Journal of the Frankilin Institute,* [*www.elsevier.com/locate/jfranklin*](http://www.elsevier.com/locate/jfranklin)*, 2009*
10. “A Biometric-Secure e-Voting System for Election Processes”, *Fifth International Symposium on Mechatronics and its Applications, 27-29 May, 2008, Amman, Jordan*
11. “A Secure Novel Sensor Fusion Architecture for Nuclear Applications”, Fifth International Symposium on Mechatronics and its Applications, 27-29 May, 2008, Amman, Jordan
12. “A New Exam Scheduling Algorithm Using Graph Coloring”, *The International Arab Journal of Information Technology,* Volume 5, Number 1, 2008; pp. 80-86
13. “Building Arab Software Industry: An Expansion to the Indian Model”, International Conference on Ubiquitous ICT for Sustainable Education and Cultural Exchange, October 6-7 2008, Hämeenlinna, Finland.
14. “Emerging Trends in Biomedical Informatics: Designing a Curriculum to Address the Current Job Market”, *The International Medical Informatics And Biomedical Engineering Symposium*, March 20-22, 2007 Jordan.
15. “Challenges to High Productivity Systems”, invited keynote speech*, International Conference on Computer and Communication Engineering May, 2006 (ICCCE’06)*
16. “Optimizing Engineering Education in Arab Universities: Toward Industry-Oriented Outcomes*”, International Forum on Engineering Education - IFEE2006 Integrating Teaching and Research with Community Service* 25-27 April 2006, University of Sharjah Sharjah , United Arab Emirates
17. “Technology Education Using a Novel Approach in e-Learning—Towards Optimizing the Quality of Learning Outcomes*”, International Forum on Engineering Education - IFEE2006 Integrating Teaching and Research with Community Service* 25-27 April 2006, University of Sharjah Sharjah , United Arab Emirates
18. “Spectrum Management and the 800 MHz Rebanding”, *Mobil Radio Technology, June 1, 2005*
19. “A Wireless Infrastructure for Traffic Speed Control”, *Conference on IT and Organization in the 21st Centtury,* Amman, Jordan, July 2004, pp. 73-84
20. “Intermod60: A High Speed Intermodulation & Interference Analysis Tool”, *White paper*, 2004, [www.aimws.com](http://www.aimws.com)
21. “A New Model for Software Industry in the Arab Countries”, Proceed.  *Information and Communication Technology- Industry Partnership Conference, Dec. 6-7, 2004 Jordan*
22. “Analysis of Failure Data in Telecomm Systems”, *International Conference on Dependable Systems and Networks (DSN 2002)*
23. “Availability Work Products – A Strategic Approach”, IEEE Signal Processing Society 5thWSES International Conference, Crete, July 2001
24. “Analysis of Failure and Recovery Rates in a Wireless Telecommunications System”, *IEEE Signal Processing Society 5thWSES International* *Conference, Crete, July 2001*
25. “Software Systems Availability Modeling and Analysis”, Motorola Report and Motorola Symposium on Software Engineering, Phoenix, AZ, June 2000.
26. “Selector Distribution Unit (SDU) Platform Availability Modeling and Analysis”, Motorola Report, Augast, 2000
27. "High Availability Models for Common Platform BTS", Motorola Report, Nov. 1999
28. "Distributed Virtual Memory Multicomputer Systems" PDPTA, Las Vegas, July 1998
29. "Infrastructure for Distributed Multimedia Applications" EUROMED Conference April, 1998, Malta
30. "Distributed Sorting Algorithms in Hypercube Systems"; IASTED, Int. Conference on Parallel Distributed Systems, Oct. 1997
31. "Infrastructure for Electronic Commerce Applications"; EUROMED Int. Conference on Electronic Commerce, Greece, July, 1997.
32. "Digital Electronic Library in the Arab World", UNESCO Int. Conference, Tunis, May, 1997
33. "Process Migration in Distributed Virtual Memory Systems," 26th Hawaii Int. Conference on System Sciences, 1993
34. "Performance Evaluation of Page Replacement and Page Out Policies in Distributed Virtual Memory Systems," 4th IEEE Symposium on Parallel and Distributed Systems, December, 1992.
35. "Estimation of Memory Requirements of Numerical Programs at Compile Time," 5th Int. Conference of Architectural Support for Programming Languages and Operating Systems, 1992.
36. "Empirical Results on the Dynamic Behavior of a Distributed Virtual Memory System", ISMM 5th International Conference on Parallel and Distributed Computing Systems, Oct. 1992
37. "Distributed Algorithms for Edge Coloring of Graphs," 5th ISMM Int. Conference on Parallel and Distributed Computing Systems, 1992
38. "Paging Behavior in Distributed Virtual Memory Systems," 21st Int. Conference on Parallel Processing, 1992
39. "Dynamic Page Distribution in Distributed Virtual Memory Systems," 4th ISMM/IASTED Int. Conference on Parallel and Distributed Systems, 1991
40. "Analysis of a Graph Coloring Based Distributed Load Balancing Algorithm" , *Journal of Parallel & Distributed Systems*, 1990, vol. 10
41. "Graph Coloring Based Distributed Load Balancing Algorithm and Its Performance Evaluation," 4th Annual Symposium on Parallel Processing, 1990.
42. "System Theory Modeling and Performance Analysis of a Distributed Load Balancing Algorithm," 32nd Midwest Symp. on Circuits and Systems, 1989
43. "Distributed Algorithms for Load Balancing in Very Large Homogeneous Systems," Fall Joint Computer Conference, 1987
44. "Performance Measurement of Paging Behavior in Multiprogramming Systems," 13th Annual Int. Conference on Computer Architecture, 1986.
45. "Compiler Directed Memory Management Policy for Numerical Programs," ACM SIGOPS 10th Symposium on OS Principles, 1985
46. Identifying Two Program Categories for Memory Management Purposes, “IEEE 8th Int. COMPSAC Conference, 1984
47. Experimental Results on the Paging Behavior of Numerical Programs," 6th Int. Conference on Software Engineering, 1982