I. EDUCATION

Ph.D., Computer Science majoring in Software Engineering, University of Texas at Dallas, Richardson, Texas, USA (2002-2005)
M.Sc., Computer Science, Wichita State University, Wichita, Kansas, USA (1997-1999)
B.Sc., Computer Science, Baghdad University, Baghdad, Iraq (1990-1994)

II. PROFESSIONAL EXPERIENCE

Associate Professor, College of Information Technology, UAE University, September 2012 – Present
Assistant Professor, College of Information Technology, UAE University, August 2006 – August 2012
Post-doctoral Scholar, Department of Computer Science, University of Texas at Dallas, Richardson, Texas, USA, Feb, 2006-August 2006
Graduate Research Assistant, Data Mining Lab., Department of Computer Science, University of Texas at Dallas, Richardson, Texas, USA, May, 2004-Dec, 2005
Graduate Teaching Assistant, Department of Computer Science, University of Texas at Dallas, Richardson, Texas, USA, May, 2003-May, 2004
Senior Software Engineer, CommerceFlow.com Corporation, San Francisco, California, USA, May 2001- Jan 2002.
Software Engineer, Disney Group/Go.com Corporation, Sunnyvale, California, USA, Dec 1999 – May 2001

III. RESEARCH

(Note: Numbers of citations mentioned are per Google scholar, after excluding self-citations.)

Total number of citations is over 230

III.1 RESEARCH INTERESTS

- **Data Mining**
    - Support Vector Machines
    - Web–browsing Behavior in the World Wide Web
    - Hierarchical Clustering

- **Information Security**
  - Intrusion detection systems
  - Firewall Policy Rules Analysis
  - Sensor networks infrastructure and applications
- **Multimedia and Information Retrieval**
  - Image Annotation
  - Image Content-based Retrieval

III.2 BOOKS

[1] **M. Awad**, Bhavani Thuraisingham, Latifur Khan, and Lei Wang, "Design and Implementation of Data Mining Tools". Taylor & Francis Group, ISBN 1420045903, June, 2009.

III.3 ARTICLES AND CHAPTERS IN BOOKS

[1] **M. Awad** and L. Khan, Classification Problems using Support Vector Machine in Data Mining, in **Encyclopedia of Data Warehousing and Mining** by Information Science Publishing, ISBN 1-59140-557-2, April 2005
[2] A. Bashir, L. Khan, and **M. Awad**, Bayesian Networks, in **Encyclopedia of Data Warehousing and Mining** by Information Science Publishing, ISBN 1-59140-557-2, April 2005

III.4 ARTICLES IN REFEREED JOURNALS

[1] I. Khalil, **M. Awad**, and A. Khreishah, "CTAC: Control traffic tunneling attacks countermeasures in mobile wireless networks", **Computer Networks: The International Journal of Computer and Telecommunications Networking** , Vol. 56, No. 15, pp. 3300-3317, October 2012 (Class A) (IF:1.49)
[2] **M. Awad** and I. Khalil, "Prediction of User's Web-Browsing Behavior: Application of Markov Models", **IEEE Transaction on Systems, Man, and Cybernetics Part B**, Vol. 42, pp. 1131-1142, August 2012. (IF 2.65), (Class A, CORE Feb 2010)
[3] I. Khalil, **M. Awad**, S. Bouktif, and F. Awwad, "MSN: Mutual Secure Neighbor Verification in Multi-hop Wireless Networks", **Security and Communication Networks Journal**, Vol. 5(2), pp. 186-196, Feb, 2011 (IF 0.356)
[4] **M. Awad**, L. Khan, and B. Thuraisingham, Policy Enforcement System for Inter-Organizational Data Sharing. **International Journal of Information Security and Privacy (IJISP)**, Vol. 4 (3): 22-39 (2010). (IF 0.1) (Rank C, CORE Feb 2010).
[5] M. Abedin, S. Nessa, L. Khan, E. Al-Shaer, and **M. Awad**, "Analysis of Firewall Policy Rules Using Traffic Mining Techniques", **International Journal of Internet Protocol Technology**, Special Issue on: Recent Advances in Network Security Attacks and Defenses, Inderscience Publisher, V. 5, No. 1-2, April 2010, pp. 3-22(20). (IF 0.29) (Rank C, CORE Feb 2010)

[6]   **M. Awad** and Latifur Khan, "Web Navigation Prediction Using Multiple Evidence Combination and Domain Knowledge". **IEEE Transactions on Systems, Man, and Cybernetics-Part A: Systems and Humans**, Vol. 37(6), 2007, pp. 1054 - 1062. (IF 1.84) (Rank B, CORE Feb 2010) (citations: 8)

[7]   **M. Awad**, L. Khan, and B. Thuraisingham, "Predicting WWW Surfing Using Multiple Evidence Combination", **VLDB Journal**, Vol. 17(3), Dec., 2005, pp. 401 - 417.(IF 3.29) (Rank A*, CORE Feb 2010) (citations: 12)

[8]   L. Khan, **M. Awad,** and B. Thuraisingham, "A New Intrusion Detection System using Support Vector Machines and Hierarchical Clustering", **VLDB Journal** , Vol. 16(4), pp. 507 – 521, 2005. (IF 3.29) (Rank A*, CORE Feb 2010) (citations: 65)

III.5   CONFERENCE PAPERS AND PRESENTATIONS

III.5.a Refereed conference proceedings

[1]   S. Bouktif and M. Awad, "Ant colony based approach to predict stock market movement from mood collected on Twitter", Proceedings of the 2013 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, 2013, pp. 837-845.

[2]   Mohammad Hayajneh, Issa Khalil, and **M. Awad**, "Non-Cooperative Uplink Power Control Game for CDMA Wireless Communications Systems", **IEEE Symposium on Computers and Communications (ISCC'09) hop Wireless Networks**, 2009, pp. 587 - 592. (Rank B, CORE 2010)

[3]   Issa Khalil, Mohammad Hayajneh, and **M. Awad**, "SVNM: Secure Verification of Neighborhood Membership in Static Multi-hop wireless networks", **IEEE Symposium on Computers and Communications (ISCC'09)**, 2009, pp. 368 - 373.(Rank B, CORE 2010)(citations: 1)

[4]   Yohan Jin, **M. Awad**, Latifur Khan, George Chen, and Fehmi Chebil, "A Framework for Image Classification". Proc. of **IEEE 2006 Southwest Symposium on Image Analysis and Interpretation**, Mar., 2006, pp. 134 - 138. (citations: 4)

[5]   Y. Jin, L. Khan, L. Wang, and **M. Awad**, "Image Annotations By Combining Multiple Evidence & WordNet". **Proceedings of the ACM Multi Media**, 2005, Singapore, pp. 706 - 715. (Rank A, CORE 2010) (citations: 126)

[6]   **M. Awad**, L. Khan, F. Bastani, and I. Yen, "An Effective Support Vector Machines (SVM) Performance Using Hierarchical Clustering", in Proc. Of the 16th **IEEE International Conference on Tools with Artificial Intelligence**, 2004, pp. 663-667.(Rank B, CORE 2010) (citations: 17)

[7]   L. Khan, **M. Awad**, and Q. Chen, "Effective Intrusion Detection Using Support Vector Machines", in Proc. of 2004 **South Central Information Security Symposium**, SCISS, pp. 8, Rice University, Houston, Texas, April, 2004

[8]   **M. Awad** and L. Khan, Hybrid DNA Sequence Similarity Scheme for Training Support Vector Machines, in Proc. of the **International Conference on Computer and Information Technology**, Dhaka, Bangladesh, pp. 247-251, December 2003

III.5.b Technical Reports

[1] M. Masud, L. Khan, B. Thuraisingham, and **M. Awad**, "Detecting New Malicious Executable Using Data Mining". University of Texas at Dallas, Technical Report id: UTDCS-27-06, July, 2006.

[2] D. Cavus, L. Khan, M. Reddy, **M. Awad**, and B. Thuraisingham, "Design and Implementation of Policy Enforcement, Data Sharing, and Mining Components for Trustworthy Coalition". University of Texas at Dallas, Technical Report ID: UTDCS-44-06, Oct., 2006.

[3] L. Khan, B. Thuraisingham, M. Kantarcioglu, D. Calvus, R. Layfield, M. Masud, S. Iyer, and **M. Awad**, "Information Operation Across Inforspheres: Volume 1", University of Texas at Dallas, Technical Report ID: UTDCS-48-06, Oct., 2006.

III.5.c Invited talks

[1]   "A New Intrusion Detection System using Support Vector Machines and Hierarchical Clustering", University of Texas at Dallas, Richardson, Texas, USA, February 2004.

III.6 CONTRACTS AND GRANTS

III.6.a Emirates Foundation Grants

[1]   "Development of Black-Oil Simulator with Parallel Processing Capabilities for Field Applications in UAE ", January 2010- January 2011, (200,000 AED) (with J. Abou-Kassam and L. Ismail).

III.6.b UAEU Research Grants

[2]   "Implementing a Practical Telemedicine System in the UAE ", Jan 2011-Jan 2012, funded by UAEU Research Grant Competition 2011, (750,000 AED) (with I. Khalil and K. Shuaib).

III.6.c UAEU Internal Individual Grants Program

[3]   "Mining Image Contents, applications and Implementation", Grant # 04-07-9-11/09, March 2009 – March 2010, (10,500 AED)

[4]   "Image and Feedback Based Web Search Engine", Grant # 01-06-9-11/07, March 2007 – March 2008, (15,000 AED)

III.7 FELLOWSHIPS, PRIZES, AND AWARDS GIVEN FOR RESEARCH OR TEACHING ACHIEVEMENTS

[1] Special Award for outstanding project, Senior IT Project Exhibition, College of Information Technology, UAE University, Fall 2010

[2] Special Award for outstanding project, Senior IT Project Exhibition, College of Information Technology, UAE University, Spring 2009

[3] Special Award for outstanding project, Senior IT Project Exhibition, College of Information Technology, UAE University, Spring 2008

[4] **Best Teaching Assistant Award** in the University of Texas at Dallas, 2004

[5] Ranked third of 37 students in my undergraduate program

III.8 EDITORSHIPS, EDITORIAL BOARDS, AND REVIEWING ACTIVITIES

[1] Member of the Organizing Committee, IEEE workshop on "Automation, Control, and Information Technologies: Opportunities at the Crossroads," UAEU, FIT, Al Ain, UAE, November 5, 2009.

[2] Member of the Organizing Committee, "International Conference on Innovations in Information Technology (IIT 2009, IIT 2012)," UAE.

[3] Reviewer and Technical Program Committee Member, "International Conference on Innovations in Information Technology," 2007, 2008, 2009, 2010, 2011, 2012.

[4] Reviewer for the following journals: International Conference on Innovations in Information Technology (IIT), IEEE Transactions on Knowledge & Data Engineering (TKDE), Information Sciences (INS), Elsevier, Kuwait Journal of Science and Engineering, Rashid Bin Hameed Prize for Culture and Science, IEEE Transactions on Parallel and Distributed Systems, International Journal of Internet Protocol Technology (IJIPT), Transactions on Dependable and Secure Computing.

IV. TEACHING, MENTORING, AND ADVISING

IV.1 COURSES TAUGHT IN THE LAST FIVE YEARS, FIT, UAEU

1. SECB408, Secure Mobile Code
    a. Spring 2012, Section 51
    b. Fall 2012, Section 01 and 51
2. CSPB441, Applied Computer Vision, Sections 51&01, Fall 2011
3. CSBP411, Machine Learning, Section 51, Fall, 2011
4. ITBP480, Senior Exhibition 2, Fall 2011
5. ITBP119, Algorithms and Problem Solving
    a. Sections 01 & 51, Spring 2013
    b. Sections 51&01, Spring 2011
    c. Sections 51&52, Fall 2010

    d.   Sections 51, 52&01, Fall 2008
6.   SWEB401, Reuse and Component-based Development,
    a.   Section 51, Spring 2011
    b.   Section 51&01, Spring 2010
    c.   Section 51, Fall 2009
    d.   Section 51&52, Spring 2009
7.   ITBP480, Senior Exhibition 1, Spring 2011
8.   ITBP319, Data Structures ,
    a.   Sections 51, Fall 2010
    b.   Sections 52, Spring 2009
    c.   Section 51&52, Fall 2006
9.   ISBP490, Senior Exhibition, Fall 2010
10.   ITBP490, Senior Exhibition, in Spring 2010, Spring 2009, Spring 2008, and Spring 2007.
11.   ITBP102, Principles of IT, Sections 51&01, Fall 2009
12.   ITBP219, Object Oriented Programming,
    a.   Section 01&53 Spring 2012
    b.   Sections 52, Spring 2009
    c.   Section 51, Fall 2007
    d.   Section 53, Spring 2007
13.   SWEB311, Software Requirements, Sections 51&52, Spring 2008
14.   SWEB301, Software Construction, Section 01, Spring 2008
15.   CSBP430, Database Systems, Section 51&52, Fall 2007

IV.2 COURSE OR CURRICULUM DEVELOPMENT

1. **SECB408 Secure Mobile Code:** improved the materials, slides, and labs.
2. **SWEB401 Reuse and Component-based Development:** developed the material and the slides
3. **ITBP119 Algorithms and Problem Solving**: edited and modified lecture slides such that extra examples, explanations, and critical thinking questions were added. Developed the assignments/projects for the course.
4. **CSBP411 Machine Learning**: edited and modified lecture slides.
5. **CSBP441 Applied Computer Vision:** edited and modified lecture slides**.**
6. **ITBP219 Object Oriented Programming:** edited and modified lecture slides such that extra examples, explanations, and critical thinking questions were added. Developed the assignments/projects for the course.
7. **ITBP319 Data Structures:** edited and modified lecture slides such that extra examples, explanations, and critical thinking questions were added. Developed the assignments/projects for the course.
8. **Coordinator of the following courses**
   - ➢ SWEB 401 Reuse and Component –based Development

➢   SWEB 312 Software Requirements and Specification

IV.3 SOFTWARE, WEB PAGES, OR OTHER CONTRIBUTIONS TO TEACHING

1. Advised 2 students in CIT to develop a tracking system for the Human Resources Department at the UAEU.
2. Coached FIT teams in Fall 07 and Spring 08 with an average of 2 hours a week to prepare FIT students for the National Programming Contest (NPC 08).

IV.4 TEACHING AWARDS AND OTHER SPECIAL RECOGNITION

1. Special Award for outstanding project, Senior IT Project Exhibition, College of Information Technology, UAE University, Fall 2010.
2. Special Award for outstanding project, Senior IT Project Exhibition, College of Information Technology, UAE University, Spring 2009.
3. Special Award for outstanding project, Senior IT Project Exhibition, College of Information Technology, UAE University, Spring 2008.
4. Best Teaching Assistant Award in the University of Texas at Dallas, 2004

IV.5 ADVISING: OTHER THAN SUPERVISING STUDENT RESEARCH

IV.5.a Undergraduate

1. Advised 18 junior (Pre-IT) students in the 2012/2013 academic year.
2. Advised junior (Pre-IT) students in the 2011/2012 academic year.
3. Advised 20 junior (Pre-IT) students in the 2010/2011 academic year.
4. Advised 10 Software Development students in the 2009/2010 academic year.
5. Advised 9 Software Development students in the 2008/2009 academic year.
6. Advised 21 Software Development students in the 2007/2008 academic year.
7. Advised 13 Software Development students in the 2006/2007 academic year.
8. Supervised internship group of 4 students in the 2009/2010 academic year.
9. Supervised internship group of 3 students in the 2008/2009 academic year.
10. Supervised internship group of 3 students in the 2007/2008 academic year.
11. Supervised two senior project groups of 5 students in the 2011/2012 academic year
12. Supervised two senior project groups of 8 students in the 2009/2010 academic year
13. Supervised two senior project groups of 8 students in the 2008/2009 academic year
14. Supervised a senior project group of 3 students in the 2007/2008 academic year
15. Supervised a senior project group of 4 students in the 2006/2007 academic year

IV.5.b Other advising activities (special assignments, recruiting, etc.)

16. Supervised a team of 2 students from the CIT to develop Tracking System for the HR Department of the UAEU.
17. Supervised the FIT team during the Leading CUP contest 2008-2009.
18. Supervised/Coached the FIT team during the National Programming Contest in 2007-2008.

IV.6 ADVISING: SUPERVISING STUDENT RESEARCH

IV.6.a Graduate

During 2004-2005, I supervised 3 graduate (Master Level) students working in research related to Privacy Preserving at the Data Mining and Database Lab. at the University of Texas at Dallas, USA.

IV.7 EXTENSION AND OUTREACH ACTIVITIES

1. Collaboration with colleagues and students at the University of Texas at Dallas, Richardson, USA, including: Drs. Latifur Khan, Bhavani Thuraisingham, Dr. Mehedy Masud, and M. Abedin.
2. Collaboration with colleagues at University of North Carolina: Dr. Ehab Al-Shaer
3. Outreached Abu Dhabi Company for Onshore Oil Operations (ADCO) to establish links and partnerships with UAEU and to gain financial support for FIT activities.

V. SERVICE

V.1 PROFESSIONAL

V.1.a Offices and committee memberships held in professional organizations

Member of ACM

V.2 CAMPUS

V.2.a Departmental

1. Coordinated the development of the new Software Engineering Program in the new restructuring of the college.
2. Shared in developing and finalizing the general outcomes of the Software Development track for ABET accreditation

3. Prepare Exit-Exam questions for the SWEB311 and SWEB401 courses
4. Member of the recruitment committee that interview Software Engineering faculty and instructor candidates
5. Coordinator of two Software Development courses

V.2.b College

1. **Member, Graduate project Committee**, 2011/2012 and 2012/2013
2. **Member, Organizing Committee, 9th International Conference on Innovations in Information Technology, 2013.**
   - ➢ Served in the special issue committee
   - ➢ Served in the technical committee
3. **Member, Organizing Committee of the IT Marathon 2013.**
   - ➢ Chaired the publicity committee
   - ➢ Served in the judging committee
   - ➢ Served in the website committee (developed the Arabic website)
4. **Member, Search Committee**, 2010/2011
5. **Member, Facility Committee**, 2009/2010
6. **Member, Teaching Committee**, 2008/2009
7. **Member, Steering Committee, National Programming Contest (NPC 2009)**
   - ➢ prepared questions in programming along their answers
   - ➢ served as a judge during the contest day
8. **Member, Organizing Committee of the IT Marathon 2009, 2010, and 2011.**
   - ➢ Served in the judging committee
   - ➢ Served in the website committee
9. **Member, Organizing Committee, Sixth International Conference on Innovations in Information Technology, 2009.**
   - ➢ Chair of Website committee
   - ➢ Chair of Workshops committee
10. **Member, Organizing Committee, International Conference on Innovations in Information Technology, 2007, 2008, 2010.**
    - ➢ Served in reviewing papers
    - ➢ Served as Session Chair
11. **Member, Organizing Committee,** "FIT Programming Contest", 2006**.**
12. **Member and Participant, "Culture Day:"** Present joint culture of Jordan and Palestine, April 2010.
13. **Member, Organizing Committee,** "FIT Second eGovernment Forum (eGov'10): Drafting an Agenda for Success in UAE" hosted by the FIT on 18 May, 2010.
14. **Member, Local Organizing Committee,** "Automation, Control, and Information Technologies: Opportunities at the Crossroads" workshop hosted by the FIT on November 9, 2009.
15. **Acting Director of the Grid Computing Lab 2009**
    - ➢ I took over the grid computing lab installation process for Dr. Leila Ismael.
    - ➢ Activities involves: Acceptance testing, inventory of computer accessories, etc.
16. **Member, Task force to assign offices to faculties and instructors in the new FIT building 2007.**

17. **Supervisor,** FIT team during University Leading Cup, 2009
18. **Judge, Senior Exhibition** in the academic years 2006-2007, 2007-2008, 2008-2009, 2009-2010
19. **Judge, IT-Core Groups,** 2007-2008
20. **Judge, Internship** 2006/2007, 2007/2008, 2008/2009
21. **Proctoring Final Exams for other colleges 2007, 2008.**
22. **Teaching:** accepted to teach extra sections during colleagues absence
    ➢ Covered for Dr. Sanja at the last 2 months of Spring 09
    ➢ Accepted to teach CSBP441 Applied Computer Vision after the appointed faculty was unable to arrive.

V.2.c Special administrative assignments

1. Coordinator of the following courses
   ➢ SWEB 311, Software Requirements
   ➢ SWEB 401, Reuse and Component-based Development
2. Coordinated the new Software Engineering Program proposed in restructuring the CIT 2013.
3. Member, Special Committee for Conflict Resolution between Ph.D./Advisor issues, 2013.
4. Participated in Software Engineering Qualify exam 2012.
5. Member, Task force to assign offices to faculties and instructors in the new FIT building 2007
6. Final Exam proctoring for other colleges 2007-2008.
7. Acting Director of the Grid Computing Lab 2009

V.2.d Other

1. Examiner, IT Core students
2. Examiner, Internship students
3. Examiner, Senior Graduation Project students

V.3 COMMUNITY, LOCAL, AND NATIONAL

1. Member, Website and Workshop committees, "Sixth International Conference on Innovations in Information Technology (IIT'09)," December 15-17, 2009.
2. Member, Steering Committee, "National Programming Contest NPC" 2008
3. Member and Participant, "Culture Day:" Present joint culture of Jordan and Palestine, November 2008 and April 2010.
4. Member, Judging and Website Committees "Second IT Marathon (ITM) Competition," 2009.
5. Member, Judging and website Committees "Third IT Marathon (ITM) Competition," 2010.
6. Judge, Rashid Bin Hameed Prize for Culture and Science, 2010, 2011.