CURRICULUM VITAE

AMER F. AL-BADARNEH

(*Associate Professor, Ph.D.*)
Computer Information Systems Department
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Researchgate: https://www.researchgate.net/profile/Amer_Al-Badarneh/publications
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EDUCATION

- **Ph.D.** (Computer Science), Wayne State University, Michigan, USA, May 2000.
- **B.Sc.** (Computer Science - with honor) Yarmouk University, Irbid, Jordan, June 1987, (85.6%). I was ranked third on a group of 106 students.

HONORS & AWARDS

- Symbolic Award by the Jordan University of Science & Technology for the following papers published in ISI Web of Knowledge Database – Journal Citation Reports (JCR):

  1. The Impact of Indexing Approaches on Arabic Text Classification, *Journal of Information Science*, accepted.
  2. Leveraged Neighborhood-Restructuring in Cultural Algorithms for Solving Real-World Numerical Optimization Problems, *IEEE Transactions on Evolutionary Computation*, online, 2015.
  3. Multi Small Index (MSI): A spatial indexing structure, *Journal of Information Science*, 39(5), 643-660, 2013.

- Al-Hussein Prize for Excellence for achieving excellence in computer science field and ranking number one (Jordan University of Science & Technology) in Jordan by the British QAA, 2004.

- Graduate teaching assistant scholarship awarded by Wayne State University, Computer Science Department, Detroit, Michigan, USA, August 1994 – May 1997.

- A full graduate fellowship awarded by Jordan University of Science & Technology, Computer Science Department, January 1993 – December 1997.

- Placed on the Honor list five times during my undergraduate study.

STATEMENT OF RESEARCH PHILOSOPHY

My experience in both teaching and industry (over 15 years) in the field of information technology has provided me with the background necessary to successfully conduct an applied and collaborative research work. Nevertheless, my experiences in USA and in Middle East (Jordan, Bahrain, & Saudi Arabia) have enabled me to embrace multicultural societies and to advocate of multi-disciplinary research. I am very interested in working with people from various cultural backgrounds.

My methodological and theoretical research as well as a considerable portion of my applied and collaborative work addresses big data management and analytics. An innovative contribution of my work is the presenting of a survey (published) that presents a comprehensive review of various implementations of MapReduce frameworks where initially we give an overview of MapReduce programming model. We then present a broad description of various technical aspects of the most successful implementations of MapReduce framework reported in the literature and discuss their main strengths and weaknesses. Finally, we conclude by introducing a comparison between MapReduce implementations and discuss open research issues and challenges on enhancing MapReduce. Moreover, there are other research work under progress just to mention, Managing Medical Images on the Cloud, Implementing Peer to Peer Fault Tolerant Model for SSS MapReduce Framework, and Join Algorithms using MapReduce

Moreover, I have been involved in many research areas including data mining, information retrieval, natural language processing, spatial data indexing, and evolutionary computation. For example, in the area of data mining, I presented a new sampling technique for association rule mining. In the areas of information retrieval and natural language processing, I presented a study that investigates the impact of using different indexing approaches (full-word, stem, and root) when classifying Arabic text. In this study, the naïve Bayes classifier is used to construct the multinomial classification models. Another study uses neural network (NN) and support vector machine (SVM) for classification of MRI of the human brain to investigate the performance impact of texture features on MRI image classification.

My research works have been published in well-known international refereed indexed specialized journals, such as Journal of Information Science, IEEE Transactions on Evolutionary Computation, International Journal of Cloud Applications and Computing, International Journal of Service Science, Management, Engineering, and Technology, Journal of the American Society for Information Science and Technology, International Journal of Computers & Applications, and Journal of Informatica.

Finally, I received local and international grants for various research and projects in various areas. I was a member of Mediterranean Virtual University project. My main task was to build a complete online course using Moodle for both Algorithms and Discrete Mathematics courses. I was also working on a project to design a data mining model for conservation and restoration of archaeological value Cu-based artifacts.

RESEARCH INTERESTS

Big Data Management & Analytics, Cloud Computing, Data Mining, Information Retrieval, Natural Language Processing, Spatial Data Indexing, Evolutionary Computation, Performance Analysis & Evaluation, Computer Algorithms, Genetic Algorithms, and Artificial Intelligence.

PUBLICATIONS

1. **Amer Al-Badarneh**, Emad Al-Shawakfa, Basel Bani-Ismail, Khaleel Al-Rabab'ah, Safwan Shatnawi, "The Impact of Indexing Approaches on Arabic Text Classification", *Journal of Information Science*, accepted, published online before print.

2. **Amer Al-Badarneh**, Mohammed Al-Rudaini, Faisal Ali, Hassan Najadat, "Index-Based Join in MapReduce Using Hadoop Map Files", *Proceedings of 5th International Conference on Researches in Science and Technology (ICRST 2016)*, accepted.

3. **Amer Al-Badarneh**, Amnah Al- Abdi, Sana'a M. Al-Shboul, Hassan Najadat, "Survey of Similarity Join Algorithms based on MapReduce", *Proceedings of 5th International Conference on Researches in Science and Technology (ICRST 2016)*, accepted.

4. **Amer Al-Badarneh**, Hassan Najadat, Enas 'Hassan Abu Yabes', "An Adaptive Role-Based Access Control Approach for Distributed E-Health Systems", *Proceedings of 5th International Conference on Healthcare, Nursing and Disease Management (HNDM 2016)*, accepted.

5. **Amer Al-Badarneh**, Ghaith Husari, Hassan Najadat, "A Model for Managing Medical Image Data on the Cloud", *Proceedings of 5th International Conference on Healthcare, Nursing and Disease Management (HNDM 2016)*, accepted.

6. Hassan Najadat, **Amer Al-Badarneh**, Huda Qawasmi, "Accreditation Software for Higher Education Programs", *Proceedings of 15th Conference on Information Technology in Higher Education and Training (ITHET 2016)*, accepted.

7. **Amer Al-Badarneh**, Hassan Najadat, Majd Al-Soud, Rasha Al-Huthaifi, "Phoenix: A MapReduce Implementation With New Enhancements", *Proceedings of 7th International Conference on Computer Science and Information Technology (CSIT 2016)*, 2016.

8. **Amer Al-Badarneh**, Hassan Najadat, Nawaf Abdulla, Abdalrhman Almodawar, Ghassan Mohsen, "A Survey of Indexing Schemes in Cloud Data Management", *Proceedings of 7th International Conference on* Computer Science and Information Technology *(CSIT 2016)*, 2016.

9. **Amer Al-Badarneh**, Emad Al-Shawakfa, Khaleel Al-Rabab'ah, Safwan Shatnawi, Basel Bani-Ismail, "Classifying Arabic Text Using KNN Classifier", *International Journal of Advanced Computer Science and Applications*, 7(6), pp. 259-268, 2016.

10. **Amer Al-Badarneh**, Hassan Najadat, Ali Alraziqi, "Brain Images Classifier: A Hybrid Approach Using Decision Trees and Genetic Algorithms", *Journal of Next Generation Information Technology*, 7(2), pp. 45-57, 2016.

11. **Amer Al-Badarneh**, Mostafa Ali, Safwan Ghaleb, "An Improved Classifier for Arabic Text", *Journal of Convergence Information Technology*, 11(3), pp. 69-84, 2016.

12. Omran Al-Badarneh, Asim El Sheikh, **Amer Al-Badarneh**, "Developing Model-Driven Quality-Aware Data Warehouses with a UML Profile", *International Journal of Computer Science and Information Security*,.14(5), pp. 456-474, 2016.

13. **Amer Al-Badarenah**, Omran Al-Badarneh, "Challenges and Interesting Research Directions in Model Driven Architecture and Data Warehousing: A Survey", *International Journal of Computer Science and Information Security*, 14(3), pp. 364-398, 2016.

14. **Amer Al-Badarenah**, Jamal Alsakran, "An Automated Recommender System for Course Selection", *International Journal of Advanced Computer Science and Applications*, 7(3), pp. 166-175, 2016.

15. Hakam Alomary, **Amer Al-Badarenah**, "A Topological-Based Spatial Data Clustering", *Proceedings of the SPIE 9845: Optical Pattern Recognition XXVII*, pp. 1-9, 2016.

16. Mostafa Ali, Ponnuthurai Suganthan, Robert Reynolds, **Amer Al-Badarneh**, "Leveraged Neighborhood-Restructuring in Cultural Algorithms for Solving Real-World Numerical Optimization Problems", *IEEE Transactions on Evolutionary Computation*, 20(2), pp. 218-231, 2016.

17. **Amer Al-Badarneh**, Amr Mohammad, Salah Harb, "A Survey on MapReduce Implementations", *International Journal of Cloud Applications and Computing*, 6(1), pp. 59-87, 2016.

18. **Amer Al-Badarneh**, Ali Razqi, Hassan Najadat, "Performance Impact of Texture Features on MRI Image Classification", *Proceedings of the International Conference on Engineering & MIS*, article 51, 2015.

19. Ali Razqi, **Amer Al-Badarneh**, Hassan Njadat, "Classification of brain diseases using MRI texture: Decision Tree and Genetic Algorithm", Book, Publisher: LAP LAMBERT Academic Publishing, Editor: Barbara Taylor, ISBN: 978-3659668456, 2015.

20. Hael Al-Bashiri, **Amer Al-Badarneh**, Ismail Hmeidi, "Recommendations Generating Using Multi Attribute Decision Making", *Saba Journal Of information Technology and Networking*, 2(1), pp. 14-22, 2014.

21. Ismail Hmeidi, **Amer Al-Badarenah**, Abdulrahman Al-Molegi, Izzat Alsmadi, "Improving Image Retrieval Through a Collection of Fast and Simple Visual Features Extraction", *Applied Mathematics & Information Sciences Letters*, 2(3), pp. 65-76, 2014.

22. **Amer Al-Badarneh**, Jim Spohrer, Basheer Al-Duwairi, "A Model Curriculum for Undergraduate Program in IT SSME", *International Journal of Service Science, Management, Engineering, and Technology*, 4(4), pp. 1-18, 2013.

23. **Amer Al-Badarneh**, Abdullah Al-Alaj, Basel Mahafzah, "Multi Small Index (MSI): A spatial indexing structure", *Journal of Information Science*, 39(5), pp. 643-660, 2013.

24. Ismail Hmeidi, **Amer Al-Badarneh**, Haya Rababah, Noor Abuelrub, Dua'a Alawad, "A Survey of Text Categorization Techniques Using Arabic Text", *Proceedings of the International Conference on Information and Communication Systems*, pp. 43-48, 2013.

25. **Amer Al-Badarneh**, Hassan Njadat, Ali Razqi, "A Classifier to Detect Tumor Disease in MRI Brain Images", *Proceedings of International Symposium on Network Enabled Health Informatics, Biomedicine and Bioinformatics*, pp. 784-787, 2012.

26. **Amer Al-Badarneh**, Isra Jaradat, "A Comprehensive Mobile PHR System Architecture", *Proceedings of the Mosharaka International Conference on Communications, Computers and Applications*, 2011.

27. **Amer Al-Badarneh**, Abdullah Al-Alaj, "A Spatial Index Structure Using Dynamic Recursive Space Partitioning", *Proceedings of the Research Conference on Innovations in Information Technology*, pp. 256-261, 2011.

28. Khalid Al Khatib, **Amer Al-Badarneh**, "Automatic Extraction of Arabic Multi-Word Terms", *Proceedings of the International Multiconference on Computer Science and Information Technology*, pp. 411-418, 2010.

29. Salim Bouamama, Abdellah Boukerram, **Amer Al-Badarneh**, "Motif Finding Using Ant Colony Optimization", *Proceedings of the International Conference on Swarm Intelligence*, pp. 464-471, 2010.

30. **Amer Al-Badarneh**, Jamal Sakran, "Graph-Clustering Association Rules Mining Algorithm", *Proceedings of International Business Information Management Conference*, 2010.

31. Ismail Hmeidi, **Amer Al-Badarneh**, Ahmad Al-Qtaish, "A New Approach for Automatic Query Expansion", *Proceedings of International Business Information Management Conference*, 2010.

32. Emad Al-Shawakfa, **Amer Al-Badarneh**, Safwan Shatnawi, Khaleel Al-Rabab'ah, Basel Bani-Ismail, "A Comparison Study of Some Arabic Root Finding Algorithms", *Journal of the American Society for Information Science and Technology*, 61(5), pp. 1015-1024, 2010.

33. **Amer Al-Badarneh**, Qussai Yaseen, Ismail Hmeidi, "A New Enhancement to the R-tree Node Splitting", *Journal of Information Science*, 36(1), pp. 3-18, 2010.

34. Basel Mahafzah, **Amer Al-Badarneh**, Mohammed Zakaria "A New Sampling Technique for Association Rule Mining", *Journal of Information Science*, 35(3), pp. 358-376, 2009.

35. **Amer Al-Badarneh**, Mustafa Tawil, "Linear R-Tree Revisited", *International Journal of Computers & Applications*, 31(2), pp. 74-83, 2009.

36. **Amer Al-Badarneh**, Mohammad Khalil, Mo'taz Al-Hami, "Improving Protein 3D Structure Prediction Accuracy Using Dense Regions Areas of Secondary Structures in the Contact Map", *American Journal of Biochemistry & Biotechnology*, 4(4), pp. 375-384, 2008.

37. **Amer Al-Badarneh**, Jamal Sakran, "A New Approach for Course Recommendation", *Proceedings of the International Arab Conference of e-Technology*, pp. 7-10, 2008.

38. Fouad El-Aker, **Amer Al-Badarneh**, "MSL: An Efficient Adaptive In-Place Radix Sort Algorithm", *Proceedings of International Conference on Computational Science*, pp. 606-609, 2004.

39. **Amer Al-Badarneh**, Fouad. El-Aker, "Efficient Adaptive In-Place Radix Sorting", *Journal of Informatica*, 15(3), pp. 1-8, 2004.

40. Fouad El-Aker, **Amer Al-Badarneh**, "Hierarchical Radix Sorting", *Proceeding of the International Conference on Innovations in Information Technology*, pp. 200-204, 2004.

41. **A. Al-Badarneh**, F. Fotouhi, "Efficient Processing of Region-Overlap Queries Using Spatial Bit-Sliced Indexing", *Proceedings of the International Conference on Information and Knowledge Engineering*, 2002.

42. Eyas El-Qawasmeh, **Amer Al-Badarneh**, "A Survey of Digital Video Shot Boundary Detection Algorithms", *Proceedings of International Conference of Applied Informatics*, pp. 497-502, 2002.

43. **Amer Al-Badarneh**, Farshad Fotouhi, "Spatial Bit-Sliced: A Spatial Index Structure for Processing Direction Operations", *Proceedings of International Arab Conference on Information Technology*, pp. 52-59, 2001.

44. **Amer Al-Badarneh**, Farshad Fotouhi, "The SBS: An Efficient Index Structure for Spatial Database Applications", *Proceedings of International Workshop on Database and Expert Systems Applications*, pp. 856-860, 2000.

45. Azzam Ibrahim, Farshad Fotouhi, **Amer Al-Badarneh**, "An Efficient Processing of Direction Operations in Spatial Databases", *Proceedings of the International Conference. of Computer Systems and Applications*, pp. 111-115, 1998.

46. Azzam Ibrahim, Farshad Fotouhi, **Amer Al-Badarneh**, "Efficient Processing of Spatial Selection and Join Operations using SB⁺Tree", *Proceedings of the International Database Engineering and Application Symposium*, pp. 279-288, 1997.

RESEARCH PAPERS IN PROGRESS

Amer Badarneh, Abdullateef Rababa'ah, Abedullah Khamaiseh, Omar Badarneh, "*Implementing Peer to Peer Fault Tolerant Model for SSS MapReduce Framework*".

Amer Al-Badarneh, Hakam Alomari, "*ACUTE: Spatial Data Clustering using Topological Relations*".

Amer Al-Badarneh, Jim Spohrer, Basheer Al-Duwairi, Mohammed Shatnawi, "*A Feasibility Study on Offering Bachelor of Service Science*".

Amer Al-Badarneh, Mustafa Tawil, "*MR-Tree: An Efficient Spatial Index Structure*".

Amer Al-Badarneh, Ismail Hmeidi, Hael Al-Bashiri, "*Recommendations Generating Using Multi Attribute Decision Making*".

Amer Al-Badarneh, Khalid Al Khatib, "*Arabic Summarization System with Single and Multi-Word Terms*".

Amer Al-Badarneh, Hassan Najadat, Sawsan Alodibat, Enas Al-Shraida, "*MapReduce Joins Algorithms: Revisited*", submitted to *Journal of Internet Technology*.

Amer Al-Badarneh, Yarub Wahsheh, Hassan Najadat, "*Hybrid Hash-Based Join Algorithm for Parallel and Distributed Computing*".

Amer Al-Badarneh, Hassan Najadat, Salah Rababah, Mohammad Rababah, "*Performance Evaluation of Bloom Filter Size in Map-side and Reduce-side Bloom Joins*"

Hassan Najadat, **Amer Al-Badarneh**, Rasha Hothaifi, Assia Abo-Zaitoon and Yasmin Omari "*Data Envelopment Analysis for Evaluating Jordanian Universities' Websites*".

Hassan Najadat, **Amer Al-Badarneh**, Zakarea Al-Shara, Anas Shatnawi and Mohammad H. Banihani, "*Methods for Cross Arabic Data Classification-Feature Selection*".

POSITIONS HELD

- **Distinguished IBM Visiting Scholar**, IBM Almaden Research Center, USA, Oct. 2012 - Dec. 2012.
  Responsibilities: Working with IBM Service Science Management and Engineering (SSME) Team to prepare an undergraduate curriculum for SSME.
- **Chair**, Computer Information Systems Department, Jordan University of Science & Technology, Jordan, Sep. 2010 – Aug. 2012.
  Responsibilities: Preparing Annual Department Budget, Department Annual Report,

Conferences and Workshops, Training, Agreements with other IT universities, Projects, Students Graduation and Updating Department Web Site.

- **SSME Program Leader**, Faculty of Computer and Information Technology, Jordan University of Science & Technology, Jordan, Jan. 2012 – Aug. 2012.
  Responsibilities: Conducting a feasibility study to establish a new undergraduate program in Service Science, Management, and Engineering.
- **Chair**, Computer Information Systems Department, Jordan University of Science & Technology, Jordan, Sep. 2003 – Aug. 2005. I was given the honor of being the first chair of this newly established department.
  Responsibilities: Students Affairs, Curriculum Planning, Training and Equalizing Courses for Transferred Students.
- **Assistant Dean**, Faculty of Computer and Information Technology, Jordan University of Science & Technology, Jordan, Sep. 2002 – Aug. 2003.
  Responsibilities: Preparing the Faculty budget and its annual report. Establishing and maintaining links with IT related external bodies. Maintaining the faculty tenders.
- **Project Manager**, Professional Services, Information Builders Inc., Troy, Michigan, USA, 1997 - 2000.
- **Senior Consultant**, Testing, Evaluation & Research, Wayne State University, Detroit, Michigan, USA, 1995 - 1997.
- **Graduate Teaching Assistant**, Dept of Computer Science, Wayne State University, USA, 1994 - 1995.
- **Database Developer**, OBSTETRICS & GYNECOLOGY, Hutzel Hospital, Detroit, Michigan, USA, 1993 - 1994.
- **System Programmer**, McInery/Miller Bros, Detroit, MI, USA, 1993 - 1993.
- **Teaching Assistant**, Dept of Computer Science, University of Jordan, Amman, Jordan, 1990 - 1993.
- **Programmer**, Computer Center, Jordanian Army, Amman, Jordan, 1987 - 1990.

STATEMENT OF TEACHING PHILOSOPHY

My desires to engage, challenge, and inspire growth of knowledge in my students. Over the past fifteen years I taught and worked with thousands of undergraduate and graduate students as a teacher, research advisor and as a senior projects advisor. I enjoy transferring knowledge and skills to my students through technology to achieve the course intended learning outcomes. It is my goal to share with students the awe and excitement, as well as the dedication and hard work that comes along with using research tools to ask and answer questions, building scenarios and activities. In the senior-level and graduate courses, I emphasize on team work, soft skills, and hands-on skills through group projects, software documentation, technical and progress reports, term papers, and presentations. Finally, I hold myself to the same standards that I hold my students. That is, I strive to become a skilled thinker and learner, and I believe that this process is life-long.

ACADEMIC EXPERIENCE

2014-now   **Associate Professor**, Computer Information Systems Department., Jordan University of Science & Technology, Jordan
Taught courses: *Database Systems, Advanced Database Management Systems, and Graduation Project.*

2003-now   **Adjunct Faculty**, Computer Science Department, Jordan University of Science & Technology, Jordan
Taught courses: *Advanced Algorithms and Advanced Database Systems*

2013-2014   **Associate Professor**, Computer Information Systems Department, Effat University, Jeddah, Saudi Arabia.
Taught courses: *Database Systems, Advanced Programming, Analysis of Algorithms, and Data Mining, and Graduation Project.*

2009-2013   **Associate Professor**, Computer Information Systems Department, Jordan University of Science & Technology, Jordan.
Taught courses: *Database Systems, Algorithms Analysis, Advanced Database Management Systems, Advanced Analysis of Algorithms, Java Programming, Data Mining and Graduation Project.*

2006-2009   **Assistant Professor**, College of Applied Studies, University of Bahrain, Bahrain
Taught courses: *Introduction to IT & Computers, Introduction to Computer Programming, Work Ethics & Values, C++ Programming, Data Structures & Algorithms, Web Server Administration, Introduction to PC Maintenance, Internet Technology, Applied Databases Management Systems and Graduation Project.*

2003-2006   **Assistant Professor**, Computer Information Systems Department, Jordan University of Science & Technology, Jordan
Taught courses: *Web & Internet Development, Systems Analysis and Design, Oracle Programming, Advanced Database Management Systems, Analysis of Algorithms, and Graduation Project.*

2002-2006   **Adjunct Faculty**, School of Engineering & Technology New York Institute of Technology (NYIT), Jordan Campus
Taught courses: *Web-Based Multimedia Development, Internet Programming Languages, Database Interface & Programming, Distributed Database Systems, Data Structures, Theory of Computation, Algorithms Concepts, Compiler Theory, and Advanced Database Systems.*

2000-2003   **Assistant Professor**, Computer Science Department, Jordan University of Science & Technology, Jordan
Taught courses: *Advanced Algorithms, Database Applications, Database Systems, Compilers Construction, Theory of Computation, Java Programming, C++ Programming, Visual Basic Programming, C Programming, Computer Literacy, and Graduation Project.*

1994-1995   **Graduate Teaching Assistant**, Computer Science Department, Wayne State University, USA
Teaching Database Systems and Computer Programming courses. Assisting students in the Information & Database Systems Course. Teaching occasional lectures, and grading a variety of exams and programming projects.

1990-1993   **Teaching Assistant**, Computer Science Department, University of Jordan, Amman, Jordan
Teaching and conducting laboratory classes for C, BASIC, COBOL, PASCAL, and FORTRAN. Conducting tutorial sessions for variety of courses. Providing various Windows and UNIX software support.

Part-Time Instructor, at:

Delmon University (Bahrain)
Taught courses: Advanced Applications in Computer Programming, Advanced Data Structures & Algorithms, Object-Oriented Analysis & Design, Compilers Constructions, Computer Graphics, Advanced Artificial Intelligence, and Theory of Computation.

Phylidipya University (Jordan)
Taught courses: Object Oriented Concepts Using Java, Multimedia Software Engineering, Physical Design and Implementation in Emerging Environment.

Jordan University (Jordan)
Taught courses: Computer Skills and C++ Programming

ACADEMIC COMMITTEES MEMBERSHIP

- **Jordan University of Science & Technology**, (2000–present):

  University Level Committees:
  - Member of the Faculty of Computer & Information Technology Foundation Committee.
  - Member of the AL-Hussian Fund for Excellence: Curriculum Design, Content and Organization Committee.
  - Member of the Center of Excellence for Service Innovation Foundation Committee.

  College Level Committees:
  - Chairman of the Department of Computer Information Systems Foundation Committee.
  - Chairman of the Students Affairs Committee.
  - Chairman of the Examinations Committee.
  - Chairman/Member of Faculty Promotion Committee.
  - Member of the Higher Studies Committee.

- Member of the Equalizing Courses Committee for Transferred Students.
- Member of the College Industrial Advisory Board
- Member of the Training Committee.
- Leader of Microsoft .Net Club at JUST.

Department Level Committees:

- Chairman of the Accreditation Committee.
- Chairman of the Curriculum Planning Committee.
- Member of the Scientific Research Committee.
- Member of the Higher Studies Committee.
- Member of the Appointment and Promotion Committee.

- **University of Bahrain**, Bahrain, (2006–2009):

  - Chairman of the Database and Web Applications Track.
  - Member of the Quality Assurance Committee.

- **Effat University**, Saudi Arabia, (2013–2014):

  - Lead of the Quality Assurance Committee.
  - Member of the Accreditation Committee.
  - Member of the Research Committee.

INDUSTRIAL EXPERIENCE

1997 - 2000 **Project Manager, Professional Services, Information Builders Inc., Troy, Michigan, USA**

Client: Ford Motor Credit Company

Enhancing and troubleshooting the Wholesale Lease System (WLS), some pieces were not functional. Conducting Y2K analysis for the focus part of WLS.

Client: Title Source Company

Designing and developing a menu driven reporting system using FOCUS under VMS. Coding and testing 20 data entry screens. Developing and implementing 27 reports. Creating production jobs using VMS command procedure language. Developing a mechanism for extracting data to be used in for their accounting application. Preparing documentation and specifications for programs.

Client: VW of America

Working with the development team on migration FOCUS applications from VMS and MVS environment to UNIX environment. Converting VMS command procedures to Perl under UNIX. Conducting full analysis using the tools, modifying and testing the applications for Y2K compliance and in some cases coordinating testing with the application owners for security purposes.

Client: General Motors Trucks Company

Working with the development team on the Truck Testing System using FOCUS. Creating Focus databases of the TSS system to be used by focus end-users for reporting. Developing Menu Screens. Writing complex Focus reports. Handling production problems.

Client: Ford Motor Credit Company

Writing complex FOCUS reports for the Auto Insurance department. Tracking system databases.

Client: Ford Motor Company

Redesigning the database of Guaranteed Employment Numbers (GEN) System using relational approach instead of hierarchical approach. More keys and indexes were added to speed up queries processing. Coding and testing 15 data entry screens using FOCUS under MVS/TSO mainframe. Developing and implementing 23 reports using FOCUS. Creating test data sets for reports testing.

1995 - 1997   Senior Consultant, Testing, Evaluation & Research, Wayne State University, Detroit, Michigan, USA

Designing and developed Special Tracking System using MS ACCESS, for talent search and upward bound projects of the University Counseling & Placement Services Department. Features include designing and developing databases for all intakes and contacts for the last five years, writing standardize SQL scripts for creating tables, reports, and indexes. Responsible for coding, implementing, & testing of data entry screens using VISUAL BASIC for the Testing and Evaluation department using data that was obtained from the scanning sheets. Developing Assessment Profile System using SAS and VISUAL BASIC. Developing Prediction Research System using SPSS for Windows to predict the performance of current freshman based on data from previous years.

1993 - 1994   Database Developer, OBSTETRICS & GYNECOLOGY, Hutzel Hospital, Detroit, Michigan, USA

Working with the development team on a Database system to keep track of patient records using FoxPro. Developing a system to help residency students generate reports and summaries. Preparing and maintaining documentation and specifications for programs. Developing a Database system to keep track of work progress of the residency students.

1993 - 1993   System Programmer, McInery/Miller Bros, Detroit, Michigan, USA

Developing a warehouse inventory control systems for the company stock using COBOL.

1987 - 1990   Programmer, Computer Center, Jordanian Army, Amman, Jordan

Developing an employee database for the Jordanian Army using COBOL under WANG. Answering users' mainframe questions, copying of licensed shareware communication packages and on-site software installation service.

GRADUATE STUDENTS SUPERVISION (M.Sc. Theses)

- I Supervised the following M.Sc. Theses:
  1. Jamal Sakran, "*A Collaborative Courses Recommendation System Using Mining Association Rules*", January 2016.
  2. Salim Bouamama, "*An Ant Colony Optimization for Finding Motifs in DNA Sequences*", May 2006.
  3. Motaz Al Hami, "*Prediction of Protein Secondary Structure Using Contact Maps*", May 2006.
  4. Qusai Yasin, "*An efficient Spatial Index Structure*", 2006/08.
  5. Hakam Al-Omari, "*ACUTE: A Spatial Data Clustering using Topological Relations*", August 2006.
  6. Mohammed Zakaria, "*A Database Reduction Technique for Association Rule Mining*", August 2006.
  7. Mustafa Tawil, "*An Efficient Node Splitting Method for R-trees*", August 2006.
  8. Ahmad Al-Qtaish, "*A New Approach for Automatic Query Expansion*", January 2007.
  9. Abdulla Al-Alaj, "*Multi Small Index (MSI): A Spatial Indexing Structure Using Threshold-based Dynamic Recursive Space Partitioning*", August 2006.
  10. Khalid Khatib, "*Arabic Summarization System with Single and Multi-Word Terms*", December 2010.
  11. Ali AlRaziqi, "*Building an Optimized MRI Brain Images Classifier Based on Hybrid Intelligent Techniques*", May 2012.
  12. Hail Albashiri, "*Collaborative Recommendation System Improvement Using Multi Attributes Decision Making Method*", November 2012.
  13. Safwan Ghaleb, "*Improving the KNN Algorithm for Arabic Text Categorization Based on Clustering*", November 2012.
  14. Abdulrahman Al-Molegi, "*Effective Image Retrieval Strategy Based on fast and Simple Computations for Visual Features Extraction*", September 2012.
  15. Huda Qawasmi, "*Accreditation System for Educational Programs*", April 2016.
- I was an examination committee member of more than 15 M.Sc. Theses.

EDITORIAL & REVIEWING ACTIVITIES

- **Scientific Committee Member**, International Conference on Information and Communication Systems, Jordan (ICICS), 2012-2016).

- **Program Committee Member**, International Arab Conference on Information Technology (ACIT 2001), Irbid, Jordan April 2001.

- **Reviewer for the Following International Journals:**

  - Journal of Supercomputing–Springer, USA
  - International Journal of Parallel, Emergent and Distributed Systems–Taylor and Francis, UK
  - Journal of Information Science–Sage, UK
  - International Journal of Computers and Applications–ACTA Press, Canada

- **Reviewer for the Following International Conferences:**
  - The International Arab Conference on Information Technology (ACIT).
  - The International Arab Conference of e-Technology (IACe-T).
  - International Conference on Information and Communication Systems (ICICS)

SELECTED SENIOR GRADUATION PROJECTS SUPERVISED

- On-Line Students Election
- On-Line Help Desk
- On-Line University Admission
- CS Department Information System
- Phone Dialer System
- Law Firm System
- On-Line Students Grade System
- E-Campus: A Virtual Tour
- Electronic Advisor
- e-Library System
- Courses Scheduling System
- Course Management System.
- Exams Scheduling System

TECHNICAL WORKSHOPS ATTENDED

- E-Learning: EndNote, Jordan University of Science & Technology, December 15-16, 2015.
- E-Learning: Open Educational Resources, Jordan University of Science & Technology, September 13-14, 2015.
- Attending the following seminars held by IBM:
  - Service Science Management Engineering (SSME), January 16-18, 2012.
  - Cloud Computing, January 29- 30, 2012.
  - Service-Oriented Architecture, February 20-21, 2012.
  - Business Process Management, February 22-23, 2012.
  - Business Analytics and Optimization, April 9-10, 2012.

- A Virtual Training Workshop on e-Learning Concepts as part of the EUMEDIS Mediterranean Virtual University (MVU) project, Amman, January 23–27, 2006.

- Tutor Training Workshop on e-Learning Concepts as part of the EUMEDIS Mediterranean Virtual University (MVU) project, University, Nicosia, Cyprus, June 27-28, 2005.

- MVU Show and Tell Workshop, Sabanci University, Istanbul, Turkey, April 19-20, 2005.

- MVU Content Provider and Developer Workshop, Jordan University of Science & Technology, Irbid, Jordan, February 2005.

- MVU Tutor Workshop, Ain Shams University, Cairo, Egypt, January 2005.

- Mediterranean Virtual University (MVU) Project: 1st Project Meeting, Crowne Plaza, Amman, Jordan, September 2004.

- Workshop on Classroom Discipline, New York Institute of Technology (NYIT), Amman, Jordan, May 2005.

- Workshop on American Teaching Methods, NYIT, Amman, January 20-21, 2005.

- The International Computer Driving License (ICDL) Advanced Workshop, Amman, Jordan, April, 2003.

- Education Technology: Testing & Assessment, Jordan University of Science & Technology, February 4-6, 2001.

- Basic Web Technology Skills for Courseware Development, Yarmouk University, February 11-15, 2001.

- Microsoft Academic Research Days, Dubai, February 2004.

- Microsoft Academic Research Days, Doha, Qatar, December 13-14, 2005.

GRANTS

- Project Title: Mediterranean Virtual University (MVU), 2004-2005

  Funded by EUMEDIS – European Union

  Amount of Grant: €221,018

- Project Title: Tailored strategies for the conservation and restoration of archaeological value Cu-based artifacts from Mediterranean Countries (EFESTUS), 2002-2004

  Funded by European Union

  Amount of Grant: €51,000
- Project Title: Indexing Animated Geographical Objects Using Spatiotemporal Access Methods, 2001-2002

  Funded by: Jordan University of Science & Technology

Amount of Grant: $2,500

- Project Title: Sales Automation Systems, 1993
  Funded by: McInerney/Miller Bros., Detroit, Michigan, USA
  Amount of Grant: $4,120

TRAINING TAKEN

- Oracle Database 11g: Administration Workshop.
- Software Engineering Fundamentals with Rational Technologies.
- Java Programming.
- Develop Database Applications with Java I & II.
- Create Dynamic Web Content with Java.
- Develop Applications with Business Components for Java.
- Develop Web Based Applications with PL/SQL.
- Oracle Application Server: Administration.
- Introduction to Oracle SQL and PL/SQL.
- Triggers and Procedures for Oracle.
- Oracle Developer Release 6: Build Forms I & II and Build Reports.

PROFESSIONAL CERTIFICATIONS & COURSES

- Cognos Business Intelligence.
- SPSS Statistics.
- SPSS Decision Management.
- SPSS Text Analytics for Surveys.
- Process Modeling & Implementation with IBM Business Process Manager.
- Developing Applications for IBM Business Process Manager Advanced.
- Getting started with SOA.
- Designing SOA Solutions Using IBM SOA Foundation.
- Essentials of Modeling with Rational Software Architect.
- Architecting Services with IBM Rational Software Architect.
- Programming with Microsoft Visual Basic.

- Microsoft Access for Windows.

- Microsoft Certified Professional.

- International Computer Driving License.

- ICDL Advanced in Presentation & Database.

TECHNICAL SKILLS

- Databases: Oracle, MS-SQL Server, MySQL, & FOCUS.

- Big Data Tools: MapReduce & Hadoop.

- Statistical Tools: SAS & SPSS.

- Data Mining Tools: Weka, RapidMiner, & R.

- Programming Languages: Java, Python, C#, C++, Visual Basic, C, Perl, & Prolog.

- Operating Systems: Unix, Linux, Windows, & MAC O.S.

- Web Tools: HTML, ASP.NET, JavaScript, JSP, & PHP.

- Applications & Tools: MS Office, Adobe Acrobat Reader/Writer, Emacs, & Pine

COURSE WORK

- **Computer Science Courses**

Basic Programming	Pascal Programming
COBOL Programming	FORTRAN Programming
Operation Research	Simulation
Computer Logic Design	File Processing
Data Structures	Fundamentals of Programming Languages
Theory of Computation	Design and Analysis of Algorithms
Operating Systems	Computer Architecture
Database Management	Artificial Intelligence
System Analysis and Design	Compilers Construction
Software Development	Pattern Recognition
Real Time Languages	Experts Systems

- **Mathematics and Statistics Courses**

Discrete Mathematics	Intermediate Analysis
Linear Algebra I	Linear Algebra II
Numerical Analysis	Abstract Algebra
Ordinary Differential Equations	Partial Differential Equations
Introduction to Statistics I & II	Introduction to Probability I & II

TAUGHT COURSES

- **Undergraduate Courses**

Information Technology	Computer Skills
C Programming	C++ Programming
Analysis of Algorithms	Theory of Computation
Database Systems	Java Programming
Data Structures	Data Mining
Compilers Construction	Web Server Administration
Web & Internet Development	Distributed Database Systems
Database Applications Using Oracle	Visual Basic Programming
Object-Oriented Analysis & Design	Computer Graphics

- **Graduate Courses**

  Advanced Database Management Systems
  Advanced Analysis of Algorithms
  Advanced Artificial Intelligence

COMMUNITY SERVICES AND EXTRA-CURRICULAR ACTIVITIES

- Committee Chair: Qualification University Examination for Computer Science, Higher Education Accreditation Commission, Amman – Jordan, (March 2015).

- Conducted several ICT workshops (2001 – 2012).

- Conducted training courses on Oracle (SQL & PL/SQL) (2003 – 2007).

- International Computer Driving License (ICDL) – Instructor (2001 – 2005).

MEMBERSHIP OF PROFESSIONAL SOCIETIES

- Association for Computing Machinery (ACM).

- Jordan Society of Computing.

LANGUAGES

- **Arabic**: Native.
- **English**: Excellent reading and writing.

REFERENCES

- Dr. James Spohrer – Director, Global University Programs, IBM Almaden Research Center, San Jose, CA 95120, USA. E-mail: spohrer@us.ibm.com

- Prof. Azzam Sleit – Former Minister of Information and Communications Technology in Jordan. Currently Dean of King Abdullah II School for Information Technology / University of Jordan. E-mail: azzam.sleit@ju.edu.jo

- Prof. Omar Al-Jarrah – President of Jordan University of Science & Technology, Jordan. E-mail: aljarrah@just.edu.jo

- Prof. Mohammed Al-Rousan – Former Dean of Faculty of Computer and Information Technology at Jordan University of Science & Technology. E-mail: alrousan@just.edu.jo

- Dr. Rehab Dwairi – Dean of Faculty of Computer and Information Technology at Jordan University of Science & Technology. E-mail: rehab@just.edu.jo

- Prof. Basil Mahafzeh – Computer Science Department / University of Jordan. E-mail: b.mahafzah@ju.edu.jo