Mostafa Ali

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Mostafa Z. Ali
IEEE Senior Member
IEEE officer, Secretary General Activities of IEEE Joint Computer/Computational Intelligence Chapter - Jordan section

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Research Interests:

Evolutionary Computation, Cultural Algorithms, Multi-Agent Modeling and Intelligent Systems, Machine Learning, Computer Graphics, Data Mining, and Bioinformatics Databases.

Education:

Sep. 2003-Apr. 2008 **Wayne State University,** Detroit, MI
Doctor of Philosophy in Computer and Information Science

- Complex Systems analysis and design. Did many projects for my PhD thesis that requires extensive programming and design in both C++, Netlogo and Java for building a social fabric influence function to support the performance of Cultural Algorithms with Dr. Robert Reynolds.
- Analysis and design of complex systems models. Built an **expert system** that I used with real-time machine learning feedback techniques for the analysis and prediction of stage 1 pressure ulcers. This is an ongoing project.
- **Bioinformatics Databases, analysis and design of experiments**, Multiple Sequence alignments using many evolutionary, genetic and cultural algorithms.
- Computer Graphics, Animation and image processing using OpenGL, MAYA, and Photoshop.
- Projects on **XML**, **JDBC**, Parsing **XML** Documents, **API** documentations, **XPATH**, using **JAVA** to read **XML** documents and write them, transform XML queries to **SQL** queries.
- A project in **JAVA** that uses **JDBC** to connect to Oracle server and perform through and interface, querying XML documents, and storing data in XML documents through XInsert statements.
- Formal Verification techniques for proving formulas and checking the validity of arguments.

- Employing Data Mining, and Machine Learning Techniques to generate the knowledge used in knowledge-based systems.
- Use ***CLIPS expert system*** developed by **NASA** to develop many expert systems for many applications, after generating rules produced by data processing including machine learning techniques.
- Advanced Concurrent Network Programming projects on ***UNIX***, ***LINUX***.
- Using nesC language, developed for TinyOS to develop a protocol to test the communication between nodes in wireless Sensor Networks (WSNs) using Sound.

Jan. 2001-June 2003 **The University of Michigan,** Rackham Grad School, Dearborn, MI
Masters of Science in Computer and Information Science

- Courses and Group projects in ***SAP*** systems, Alternative designs and Solutions for different kinds of Organizations.
- Excellent Work on ***Oracle 9i***.
- Excellent Work and Experience on Multimedia Web Design using ***CGI.pm*** and ***ASP*** and other Web skills (***HTML***, ***DHTML***, ***XML***, ***java scripts***, ***MySQL*** integration in the Web page, ***CSS***, ***XSL***).

Summer 2000 **Jordan University of Science & Technology.**
Bachelor of Science in Applied Mathematics

- Graduated with honor's with an Excellent GPA. (84.6/100)
- Pharmacy Department: Statistical methods and analysis for data provided by the pharmacy department using probabilistic distributions, ***ANOVA*** tables, ***SAS***, and ***SAP*** system.

Experience:

May 2008-Now **Jordan University of Science & Technology**, Irbid, Jordan

- Assistant Professor in the Computer & Information Systems Department
  Taught many courses:
  - Decision Support Systems, CIS 330
  - Business Data Communications, CIS 442
  - Operating Systems for Business Applications, CIS 345 (windows, Mac & Linux)
  - Database Applications (Oracle 10g), CIS 421.
  - Artificial Intelligence, CS 362
  - Computer Graphics using OpenGL, CS 480
  - Programming using Visual Basic .NET, CS 116
  - Knowledge-Based Systems, CIS 430
  - Web Design, CIS201
- Worked on many supported projects, the latest of which are:
  - A project supported from the European Union (historical recreation using augmented reality): supporting documents can be provided for employers
  - A project supported from the Higher Council of Science & Technology, Jordan, to employ virtual reality technologies in enhancing medical student's and practitioners' experiences.

- Did consultation for several companies in the following topics:
  - Analyze the impact of new business ideas, rules, and strategies before implementation on live customers-offline, without causing disruptions in service, using ARENA simulation, modeling, animation, and reporting, and data mining and machine learning techniques.
  - A project with a company for the implementation of a land use-urban growth model to illustrate complex relationships and problems as occurring in cities. The purpose of this project is to conceptualize land use changes and urban growth.
  - Data analysis and the design of effective and smart expert system with high accuracy for predicting different stages of pressure ulcers in Jordan. A project built in Eclipse IDE (JAVA) and had its own visuals.

Dec. 2007-July 2008 **Research Project supported by the U.S government through a physical doctor***,* Indianapolis, Indiana

- Analysis and design of complex systems models. Built an **expert system** that I used with WEKA for the analysis and prediction of stage 1 pressure ulcers.

Aug. 2005-May 2008 **Wayne State University,** Detroit, MI

- Graduate Teaching Assistant.: taught and/or helped teaching in many courses,
  - Introduction to programming in C & UNIX
  - Advanced Data Structures 1
  - Advanced Data Structures 2
  - Artificial Intelligence
  - Expert Systems
  - Game Design

Mar. 2006-Oct 2006 **Detroit Medical Center (DMC)**, Detroit, MI

- Manage the Oracle and Access databases for the Children's Hospital of Michigan.
- Analysis of data using SPSS, MATLAB, and MINITAB.
- Development of Knowledge Rules for Cancer Expert System for Prediction of Carcinogenic Potential of Chemicals.

Dec. 2003-June. 2005 **Wayne State University,** Detroit, MI

- Network administrator for the industrial engineering department.
  - Manage the network for the whole building.
  - Build and maintain the servers as needed (Windows 2003 server, SQL server, FTP server, Backup server)
  - Systems troubleshooting and maintenance for the department.

Sep. 2002-Jul. 2003 **The University of Michigan,** Dearborn, MI

- A professional and big work on a research on finding Design Alternatives and solutions for Organizational Information Systems using SAP, Modeling and Simulation.
- Grader in the Computer Science Department.
- Worked on a Research with a professor Qiang Zhu, the research is about Query Optimization using Similarity of Subqueries.
- Help in writing a lab handbook in database (Co-author).

Dec. 2000- Dec. 2001 **Jordan University of science and Technology,** Irbid, Jordan
Teacher and Research Assistant, Dept. of Computer Science.

- Teacher and Research Assistant, Teaching many high level courses for undergraduate students.
- Worked as leader for the group that designs, maintains and monitors the Webpage for the University.
- Work in the Computer Center in the University as a ***Visual C++*** and ***Windows Programmer***, and managed the *SAP* Server.
- Giving many professional lectures to Instructors/Students on the following subjects:
  - ***Oracle 10g***.
  - ***ARENA***
  - ***SAP***, as a guide to a successful company.
  - Multimedia Web Design.
  - ***Visual C++*** and Windows Programming.
  - ***JAVA Programming.***
  - ***UNIX*** and ***LINUX***, concurrent network Programming.

Dec. 2000-Dec. 2001 **Jordan Company for Computer & IT projects**, Amman, Jordan

- Network Administrator & system Integrator, where my duty was as follows:
  - Managing the network and upgrading software for all departments.
  - Update the Database for the used (in my Network, and the Website).
  - Managing the Web for the company using all different skills listed above.
  - An effective team member in the upgrading and Monitoring Team for the IT Department in the company.
  - Present Bi-Weekly statistical reports for the data analysis provided for some projects from other departments especially marketing.

Courses Taught:

Wayne State University, Detroit, MI
Computer Science Department
- Graduate Courses

Csc7800 Artificial Intelligence I

Fall 2006, Winter 2007, Fall 2007, Winter 2008

Csc6800 Artificial Intelligence II
Fall 2006, Winter 2007, Fall 2007, Winter 2008

- *Undergraduate Courses*

Csc1100 Problem Solving and Programming
Fall 2005

Csc2111 Computer Science I: Lab (Data Structures)
Winter 2006

Csc7800 Artificial Intelligence II
Winters 2006, Fall 2006

Csc1050 Introduction to C and UNIX
Summers 2006, 2007

Csc2201 Computer Science II: Lab (Data Structures II)
Fall 2007, Winter 2008

Jordan University of Science & Technology, Irbid, Jordan
Computer Information System / Computer Science Department

- *Graduate Course*

MIST720 Database Management Systems @ NYIT
Winter 2010

- *Undergraduate Courses*

Cs116 Selected Programming Languages (Visual Basic)
Summer 2008, Fall 2008, Summer 2009

Cis201 Introduction to Web Design
Summer 2010, Summer 2011

Cs362 Artificial Intelligence
Fall 2008

Cs480 Computer Graphics using OpenGL
Fall 2008

Cis430 Knowledge-Based Systems
Winter 2009, Fall 2009, Winter 2010, Summer 2010, Fall 2010, Winter 2011, Summer 2011, Fall2011

Cis421 Databases Applications
Winter 2009

Cis345 Operating Systems for Business Applications
Winter 2010, Fall 2010, Winter 2011, Fall2011, Fall 2012, Winter 2013, Fall2013

Cis442 Networking and Business Data Communication
Winter 2011, Fall2011, Summer 2012, Fall 2012, Winter 2013, Summer 2013

Cis429 Data Mining
Winter 2012

Cis330 Decision Support Systems
Winter 2012, Summer 2012, Fall 2012, Winter 2013, Summer 2013, Fall2013

Laboratory Development

At Wayne State University (2005 – 2008)

- Introduction to C and UNIX
- Problem Solving and Programming
- Computer Science I: Lab (Data Structures)

At Jordan University of Science & Technology (2008 – Now)

- Artificial Intelligence
- Computer Graphics using OpenGL
- Decision Support Systems
- Knowledge-based Systems
- Databases Applications
- Operating Systems for Business Applications
- Data Mining
- Networking and Business Data Communication
- Introduction to Web Design

Masters Thesis Advisor/Co-Advisor

At Jordan University of Science & Technology

Student Name	Degree	Department	Role	Period
Safwan Ghaleb	*MS*	*CS*	*Advisor*	*2011 – 2012*
Yara Al-Manaseer	*MS*	*Architecture*	*Co-Advisor*	*2010 – present*
Abeer Al-Bashiti	*MS*	*Electrical Engineering*	*Co-Advisor*	*2012 – present*
Noor Awad	*MS*	*Computer Engineering*	*Co-Advisor*	*2013 – present*
Ibrahim Mahmoud	*MS*	*CS*	*Co-Advisor*	*2009 – 2011*
Shaimaa Albaset	*MS*	*CS*	*Co-Advisor*	*2009 – 2012*
Ali Alrazqi	*MS*	*CS*	*Member*	*2009 – 2012*

Computer Skills

- Android-based applications development (see publications with students below)
- Mobile Game development – Xcode 4 & Android.
- Rockwell ARENA
- Professional work on ***Oracle 10g***
- Computer Graphics and 3D-Animation using OpenGL, MAYA, and Photoshop.
- Professional work on ***SAP*** *system.*
- Professional work on ***MATLAB***.
- Python
- Blender Modeling and Animation (Control with Python Scripting)
- **JAVA** programming.
- **Processing (Animation and Modeling)**
- Professional Work on ***VISUAL C++ and Windows Programming***.
- ***C programming***.

- ***PASCAL Programming***.
- ***HTML***, ***DHTML***, ***XML***, ***XHTML***, ***PERL programming***, ***CGI.pm***, ***XSL***, ***CSS, MySQL***.
- Web Design using ***ASP*** and ***CGI.pm***.
- ***VISUAL BASIC*** Programming.
- ***Microsoft SQL Server***.
- ***FORTRAN Programming***.
- ***Assembly Programming***

Publications:

International Journals:

- **Mostafa Z. Ali**, Noor H. Awad, A novel class of niche hybrid Cultural Algorithms for continuous engineering optimization, Information Sciences, Volume 267, 20 May 2014, Pages 158-190, ISSN 0020-0255. **ISI impact factor: 3.67**
- **Mostafa Z. Ali**, Robert G. Reynolds, Cultural Algorithms - A Tabu Search Approach for the Optimization of Engineering Design Problems. Soft Computing (2013): 1-14, November 17, 2013. **Impact factor: 1.124**
- **Mostafa Z. Ali**, Khalid Al-Khatib, Yahya Tahstoush, Cultural Algorithms: Emerging Social Structures for the Solution of Complex Optimization Problems. International Journal of Artificial Intelligence, vol. 11, no. 13, 20-42, 2013.
- Ibrahim Mahmoud, Ayad Salhieh, and **Mostafa Ali**, Using Cultural Algorithms for Sprouting Multi-robot Coordination Strategies for Dynamic Environments. International Journal of Advanced Robotic Systems: Robot Learning, 2014. (***under review***)
- Mostafa Z. Ali, Robert G. Reynolds, Ponnuthurai N. Suganthan, Amer F. Al-Badarneh, The Effect of Leverage Neighborhood-Restructuring on Evolving Sociocultural Problem-solving Knowledge. IEEE Transactions on Evolutionary Computation, 2014. (***under review***)
- **Mostafa Z. Ali**, Ayad Salhieh, and Robert G. Reynolds. The Emergence of Cultural Metacognition in Non-stationary landscapes via a Layered Social Fabric Metaphor. Computational Optimization and Applications, Springer 2014. (***under review***)
- Shaima'a Albaset, Ayad Salhieh, **Mostafa Z. Ali**, An Adaptive Knowledge Base for Skills Training and Assessment of I-Surgery System. Expert Systems with Applications, Elsevier, 2014. (***under review***)
- **Mostafa Z. Ali**, Ayad M. Salhieh, Randa T. Abu Snanieh, Robert G. Reynolds: Boosting cultural algorithms with a heterogeneous layered social fabric influence function. Computational & Mathematical Organization Theory 18(2): 193-210 (2012). **Impact factor: 0.424**
- Randa T. Abu Snaineh, Alalya K. Bani Younes, **Mostafa Z. Ali**, Ayad Salhieh and Robert G. Reynolds. I-Architect: A Virtual Reality CAD System. The IEEE Multidisciplinary Engineering Education Magazine, Vol 6, No 4 (2011)
- Robert G. Reynolds, Xiangdong Che, **Mostafa Ali**. Weaving the social fabric: The past, present and future of optimization problem solving with cultural algorithms. "International Journal of Intelligent Computing and Cybernetics", 2010, Vol 3, No 4, pp. 561 – 592 – Best Paper Award.
- **Mostafa Ali**, Ayad Salhieh, Yaser Khamayseh, Rami Al-Gharaibeh, Using Immersive Virtual Reality as an Application for Knowledge Dissemination. The International Journal of Learning, vol. 16, No. 9, pp. 9-18, 2009.
- Reynolds, R. G., and **Ali, M. Z**, "Embedding a Social Fabric Component into Cultural Algorithms Toolkit for an Enhanced Knowledge-Driven Engineering Optimization",

International Journal of Intelligent Computing and Cybernetics (IJICC), Vol. 1, No 4, pp. 356-378, 2008 – Best Paper Award.

- R. G. Reynolds, and **M. Z. Ali**, "Computing with the Social Fabric: The Evolution of Social Intelligence within a Cultural Framework, IEEE Computational Intelligence Magazine, IEEE Press, February, vol. 3, no.1, pp. 18-30, 2008. **Impact factor: 4.629**
- R. G. Reynolds, **M. Z. Ali**, and T. Jayyousi, "Mining the Social Fabric of Archaic Urban Centers with Cultural Algorithms", IEEE Computer, IEEE Press February, vol. 41, no. 1, pp. 64-72, 2008. **Impact factor: 1.675**
- R. G. Reynolds, B. Peng, B., and **M. Z. Ali**, "The Role of Culture in the Emergence of Decision-Making Roles: An Example Using Cultural Algorithms", Complexity Journal, vol. 13, no. 3, pp. 27-42, 2007. **Impact factor: 1.333**

Book Chapters:

- **Mostafa Ali**, Robert Reynolds, Rose Ali and Ayad Salhieh, Knowledge-based Constrained Function Optimization using Cultural Algorithms with an Enhanced Social Influence Metaphor. Computational Intelligence Studies in Computational Intelligence Volume 343, 2011, pp 103-119
- Reynolds, R.G.,Whallon, R., **Ali, M. Z.**, Zadegan, B. M., "Agent-Based Modeling of Early Cultural Evolution" in Simulating Change: Archaeology into the 21st Century, Eds. Andre Costopolous and Mark Lake, University of Utah Press, Salt Lake City Utah, pp: 38-52, 2010.
- **Mostafa Z. Ali** and Robert G. Reynolds and Xiangdong Che. Genetic Programming for Incentive-Based Design within a Cultural Algorithms Framework. In Rick L. Riolo and Terence Soule and Bill Worzel editors, Genetic Programming Theory and Practice VI, chapter 16, pages 249-269. Ann Arbor, 2008.
- Reynolds, R.G., **Ali, M.Z.**, and Franzel, P., "Using GP and Cultural Algorithms to Simulate the Evolution of an Ancient Urban Center", in Advances in Genetic Programming Theory and Practice, Editors: Rick Riolo and Bill Wurzel, Kluwer Academic Press, Ann Arbor, MI., 2007.

Book proposals in preparation

- Cultural Algorithms in Theory and Practice, co-authors Robert G. Reynolds, **Mostafa Ali**.
  This book focuses on the design of Cultural Algorithm solutions to real world problems. It begins with the introduction of a simple CA in part I, and then proceeds to add on additional Cultural Knowledge through progressively more complex examples in part II. Part III examines real world applications of the technique.

International Conferences:

- **Mostafa Ali**, Abdulmalik Morghem, Jafar AlBadarneh, Rami Al-Gharaibeh, Ponnuthurai Suganthan and Robert Reynolds, Cultural Algorithms Applied to the Evolution of Robotic Soccer Team Tactics: A Novel Perspective. IEEE Congress on Evolutionary Computation 2014. Accepted.
- Ibrahim Mahmoud, Lianchao Li, Dieter Wloka and Mostafa Ali, Believable NPCs in Serious Games: HTN Planning Approach Based on Visual Perception. IEEE Conference on **C**omputational **I**ntelligence and **G**ames (CIG) 2014. Accepted.

- **Mostafa Z. Ali**, Noor H. Awad, Robert G. Reynolds: Hybrid niche Cultural Algorithm for numerical global optimization. IEEE Congress on Evolutionary Computation 2013: 309-316
- Noor H. Awad, **Mostafa Z. Ali**, Rehab M. Duwairi: Cultural Algorithm with improved local search for optimization problems. IEEE Congress on Evolutionary Computation 2013: 284-291.
- **Mostafa Z. Ali**, Robert G. Reynolds: The Emergence of Cultural Hierarchical Social Networks in Complex Environments. AIMSA 2012: 69-78.
- **Mostafa Z. Ali**, Ayad M. Salhieh, Robert G. Reynolds: Socio-cultural evolution via neighborhood-restructuring in intricate multi-layered networks. IEEE Congress on Evolutionary Computation 2012: 1-8
- **Mostafa Z. Ali**, Ayad Salhieh, Randa T. Abu Snanieh, Robert G. Reynolds: Boosting Cultural Algorithms with an incongruous layered social fabric influence function. IEEE Congress on Evolutionary Computation 2011: 1225-1232
- CHE, X.; **ALI, M.**; REYNOLDS, R.. Weaving the Social Fabric: The Past, Present, and Future of Optimization Problem Solving with Cultural Algorithms. AAAI Fall Symposium Series, North America, Nov. 2010.
- **Mostafa Z Ali**, Robert G. Reynolds and Noor Awad, Solving Structural Engineering Optimization Problems with an Amalgam Social Cultural Algorithms. International Conference on Artificial Intelligence, Knowledge Engineering and Data Bases (AIKED '13), Cambridge, U.K 2013: 61-66.
- **Mostafa Z Ali**, Robert G. Reynolds and Noor Awad, Niching Cultural Algorithm for Continuous Engineering Optimization. International Conference on Artificial Intelligence, Knowledge Engineering and Data Bases (AIKED '13), Cambridge, U.K 2013: 67-72.
- **Mostafa Z. Ali**, Ayad Salhieh, and Robert G. Reynolds. The Emergence of Social Complexity in Optimizing Mechanical Design Problems via Cultural Learning. International Conference on Systems Theory and Scientific Computation (ISTASC '12), Istanbul, Turkey 2012: 136-141.
- Ibrahim Mahmoud, Ayad Salhieh, and **Mostafa Ali**, Evolving Effective Multi-robot Coordination Strategies for Dynamic Environments Using Cultural Algorithms. International Conference on Systems Theory and Scientific Computation (ISTASC '12), Istanbul, Turkey 2012: 170-175.
- Xiangdong Che, **Mostafa Z. Ali**, Robert G. Reynolds: Robust evolution optimization at the edge of chaos: Commercialization of culture algorithms. IEEE Congress on Evolutionary Computation 2010: 1-8. – Best Paper Award
- Xiangdong Che, **Mostafa Z. Ali**, Robert Gene Reynolds: Weaving the Social Fabric: The Past, Present, and Future of Optimization Problem Solving with Cultural Algorithms. AAAI Fall Symposium: Complex Adaptive Systems 2010
- **Mostafa Z. Ali**, Robert G. Reynolds, Rose Ali: Enhancing Cultural Learning under Environmental Variability Using Layered Heterogeneous Sociometry-Based Networks. IAT 2010: 69-74
- Reynolds, R.G., Che X., and **Ali, M.** (2010). The Development of Research and Business Friendly Social Evolutionary Tools: The Cultural Algorithm Toolkit Example. In Proceedings of Special Session on Computational Intelligence Research Tools, Organizers A. Zazala, and K. Crocket, World Congress on Computational Intelligence. Barcelona, Spain, July 18-23, 2010.
- **Ali, M. Z.** and Reynolds, R. G. 2009. An Intelligent Social Fabric Influence Component in Cultural Algorithms for Knowledge Learning in Dynamic Environments. In Proceedings of the 2009 IEEE/WIC/ACM international Joint Conference on Web intelligence and intelligent Agent Technology - Volume 02 (September 15 - 18, 2009)
- **Mostafa Z. Ali**, Yaser Khamayseh, and Robert Reynolds, "Knowledge-Driven Framework for Solving Nonlinearly Constrained Global Optimization Problems", International Conference on Evolutionary Computation, Portugal 2009.

- Reynolds, R G., and **Ali, M Z.**, "Cultural Algorithms: Knowledge-Driven Engineering Optimization via Weaving a Social Fabric as an Enhanced Influence Function", Proceedings of the IEEE World Congress on Computational Intelligence, Hong Kong, June 1-6, 2008.
- Reynolds, R G., and **Ali, M Z.**, "The Social Fabric Approach for a Better Knowledge Integration in Cultural Algorithms", Proceedings of the IEEE World Congress on Computational Intelligence, Hong Kong, June, pp. 1-6, 2008.
- Reynolds, R G., and **Ali, M Z.**, Exploring Knowledge and Population Swarms via an Agent-Based Cultural Algorithms Simulation Toolkit (CAT), in proceedings of IEEE Congress on Computational Intelligence 2007.
- Reynolds, R G., and **Ali, M Z.**, The Cultural Algorithm Simulation Toolkit: An Approach for Solving Optimization Problems, submitted for publication to NACSOS 2007.
- **Mostafa Z. Ali.** A Report on Cultural Algorithms Tutorial System (CAT), A report for the IEEE supported by W.J. Karplus Summer Research Grant.
- Reynolds, R.G., Whallon, R., **Ali, M.**, Zadegan, B., "Agent Based Modeling of Early Cultural Evolution", Proceedings of the IEEE World Congress on Computational Intelligence, Vancouver, B.C., July 16-21, 2006.
- Reynolds, R.G., **Ali, M.**, and Alomari, R., "Optimization Problem Solving using Predator/Prey Games and Cultural Algorithms", in Proceedings of the 2006 IEEE Symposium on Computational Intelligence and Games, Ed. S.J. Louis and G. Kendall, Reno/Lake Tahoe, Nevada, May 22-24, 2006, pp: 119-125.

Publications and accomplishments with Undergraduate Students

Encouraged Undergraduate students on research work and had several students publish in international conferences and specialized undergraduate research conferences, the latest of which are:

- Bassam A. Khuwaileh, R. R. Samrdali, **M. Ali**, A. A. Rabadi, A.N. Bader, M.Khasawneh. Emergency Android-based Application for Radiation Evasion in Nuclear Facilities. The Third Annual Undergraduate Research Conference on Applied Computing, Zayed University Dubai, UAE 2012. Accepted.
- Ala'a F.Drabseh ,Esra'a A.Al-Sayis, Wafa'a, M.Towaiq, **Mostafa Z. Ali**. Gesture Recognition & Manipulation in Phone Apps for Projected Surfaces. The Third Annual Undergraduate Research Conference on Applied Computing, Zayed University Dubai, UAE 2012. Accepted.
- Batool Al-Zakaria, Salam Al-Hassan, **Mostafa Z. Ali**. Car Plat Recognition System. The Third Annual Undergraduate Research Conference on Applied Computing, Zayed University Dubai, UAE 2012. Accepted.
- Mothana Ibrahim Al-Faouri, **Mostafa Z. Ali**, Ahmad Yousef Okasheh. Electronic Patient Triage & Tracking System (EPTTS). The Third Annual Undergraduate Research Conference on Applied Computing, Zayed University Dubai, UAE 2012. Accepted.
- Hadeel Salih, Shoroq Ghraiz, **Mostafa Z. Ali**. 3D Virtual tutoring System for Architectural Designs. The Third Annual Undergraduate Research Conference on Applied Computing, Zayed University Dubai, UAE 2012. Accepted.
- Randa T. Abu Snaineh, Alalya K. Bani Younes, **Mostafa Z. Ali**, Ayad Salhieh and Robert G. Reynolds. I-Architect: A Virtual Reality CAD System. The IEEE Multidisciplinary Engineering Education Magazine 2011. Accepted.
- Randa Abu Snaineh, **Mostafa Z. Ali**, and Ayad Salhieh. I-CAD: An Intelligent Virtual Reality CAD System. The Third Annual Undergraduate Research Conference on Applied Computing, Zayed University Dubai, UAE 2011. Accepted.
- Mu'Ath Al-Qatnany, Yasmina Farah, Fatima Hassain, Bayan Al Khasoneh, Ayad Salhieh and **Mostafa Ali**. I-TACAS: An Intelligent Traffic Alert and Collision Avoidance System.

The Third Annual Undergraduate Research Conference on Applied Computing, Zayed University Dubai, UAE 2011. Accepted.

- Ala'A Almasri, Nancy Alhalaikah, **Mostafa Ali** and Ayad Salhieh. i-Surgeon: A Virtual-Training Environment For Innovative Medical Education. The Third Annual Undergraduate Research Conference on Applied Computing, Zayed University Dubai, UAE 2011. Accepted.

Professional Development Activities

Organization of special sessions at conferences

1. IEEE WCCI'12: Brisbane, Australia, June 2012, 1 special session
2. IEEE CEC'13: Cancun, Mexico, June 2013, 1 special session
3. IEEE WCCI'14: Beijing, China, July 2014, 1 special session

Refereeing Activities

- Referee for the following international journals:
  - Information Sciences journal, Elsevier
  - International Journal of Intelligent Computing and Cybernetics
  - IEEE Transactions on Evolutionary Computation
  - Int. J. of Artificial Intelligence
- Referee for several regional and international conferences

Committee Membership &/or Reviewing: Conferences, Symposia & Workshops

1. Reviewed papers for the first Int. Conf. on Information and Communication Systems 2010 (ICICS'10)
2. Reviewed papers for the second Int. Conf. on Information and Communication Systems 2011 (ICICS'11)
3. Program Committee member of Int. Conf. on Evolutionary Computation Theory and Applications 2011 (ECTA'11)
4. Reviewed papers for the fourth Int. Conf. on Information and Communication Systems 2013 (ICICS'13)
5. Reviewed papers for the 2013 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT)
6. Reviewed papers for the IEEE Congress on Evolutionary Computation 2013 (CEC'13)
7. Reviewed papers for the fifth Int. Conf. on Information and Communication Systems 2014 (ICICS'14)
8. ITPC of workshop on Digital Documentation Applications in the Interpretation of Archaeological Sites and Museums (IAM'14), Amman, Jordan, 2014.
9. Reviewed papers for the IEEE World Congress on Computational Intelligence 2014 (WCCI'14)

Attended Conferences, Workshops, Training Courses with Certificates

- IEEE Congress on Evolutionary Computation (CEC'06), Vancouver, Canada, 2006
- IEEE Congress on Evolutionary Computation (CEC'07), Singapore, 2007
- IEEE Congress on Evolutionary Computation (CEC'08), Washington, DC, USA, 2008
- IEEE Int. Agent Technology (IAT'09), Milan, Italy, 2009
- Int. Conf. on Evolutionary Computation, Portugal 2009

- IEEE Congress on Evolutionary Computation (CEC'10), Barcelona, Spain, 2010
- Int. Conf. on Information and Communication Systems, ICICS'10, Jordan
- IEEE Congress on Evolutionary Computation (CEC'11), New Orleans, LA, USA, 2011
- Int. Conf. on Information and Communication Systems, ICICS'11, Jordan
- Int. Conf. on Information and Communication Systems, ICICS'12, Jordan
- The 12th Int. Conference on Systems Theory and Scientific Computation (ISTASC'12), Istanbul, Turkey 2012
- IEEE Congress on Evolutionary Computation (CEC'12), Brisbane, Australia, 2012
- The 15th Int. Conf. on Artificial Intelligence: Methodology, Systems, Applications, Varna, Bulgaria, 2012.
- Int. Conf. on Information and Communication Systems, ICICS'13, Jordan, 2013.
- Int. Conf. on Artificial Intelligence, Knowledge Engineering and Data Bases (AIKED'13)
- IEEE Congress on Evolutionary Computation (CEC'13), Cancun, Mexico, 2013
- Mobile Apps & Augmented Reality Workshop: Building innovative applications for cultural and natural heritage, Barcelona, Spain, 2014

Staff Training Courses – with certificates

- Accreditation Board for Engineering and Technology (ABET), Academic development center, JUST, Jordan, 2014
- SPSS Workshop, Academic development center, JUST, Jordan, 2014
- Training Workshop on Digital Documentation Applications in the Interpretation of Archaeological Sites and Museums, Jordan, 2014

University/Departmental Services

- Curriculum committee member: 2008. This standard was a cooperative project between the Association for Computing Machinery (ACM), the Association for Information Systems (AIS), and the Computer Society (IEEE-CS)
- ABET accreditation: 2014
- Promotion/appointment committee member: 2008
- Graduation projects and industrial training committee member: 2008-now
- Head of the Curriculum Planning Committee in Computer Information Systems: 2013. This standard was a cooperative project between the Association for Computing Machinery (ACM), the Association for Information Systems (AIS), and the Computer Society (IEEE-CS)
- Exam and disciplinary committee member: 2010
- Research funding committee member: 2009-2011
- Graduate committee member: 2010
- Tender committee member: 2014
- Exam scheduling coordinator: 2008-2012
- Students Advising: 2008-now

Professional Society Membership:

- IEEE (Computer Science Section)
  - ✓ IEEE Senior Member (May 2014 – Now)
  - ✓ IEEE Member (Jan 2005 – Now)
  - ✓ Member of IEEE Computational Intelligence Society (CIS) (Jan 2005 – Now)
  - ✓ Member of IEEE Robotics and Automation Society (RAS) (May 2009 – Now)

- Association for Computing Machinery (ACM)
- SIGART (ACM Special Interest Group on Artificial Intelligence)
- American Association of Artificial Intelligence (AAAI)

Honors, Awards, and Grants:

- Augmenting Radiation Evasion for Nuclear Facilities with an Evolutionary approach: optimizing the radiation evasion criterion. JUST faculty research grant – JD5,400. 2014.
- Multi-Robot Players Coordination using an adjusted Cultural Algorithms: Evolving Effective Offensive and defensive Strategies. JUST faculty research grant – JD5,700. 2014.
- Elevation to the IEEE Senior Member. 2014.
- Part of the project "International Augmented Med (IAM)-Multimedia and interactive technologies for the promotion of cultural and natural heritage": Historical recreation and renovation: a new perspective for tourism in Jordan. Funded by the EUROPEAN UNION. €500,000. 2013.
- IJICC Best paper award – 2011.
- IEEE CEC Best Paper Award 2010.
- i-Surgeon: A Virtual-Training Environment For Innovative Medical Education, Accepted by the Higher Council for Science & Technology, Information Technology Sector. Jordan. Amount: JD40,000. 2010.
- Emerald Literati Network Award for Excellence, 2009.
- IJICC Best paper Award - 2009
- Distinguished PhD Graduate Award, supported by the Computer Science department and the Graduate School, Wayne State University, 2008.
- Research grant provided by the medical school-Indiana to construct an expert system for detecting stage 1 pressure ulcers based on data provided by the government (MDSs), 2008 ($5000).
- Graduate Teaching Assistant Award, Computer Science, Wayne State University, 2007.
- IEEE W.J. Karplus Summer Research Grant, 2006 ($2000).
- WCCI 2006 Phase II Travel Grants, Vancouver, Canada ($400).
- WSU graduate school travel grant award ($400).Travel to World Congress on Computational Intelligence(WCCI)2006
- Honor Student Award - Jordan University of Science Tech. – 1998.
- Honor Student Award – Jordan University of Science Tech – 1999.
- Honor Student Award – Jordan University of Science Tech – 2000.
- Honor Student Award – Jordan University of Science Tech - 2000
- "Full scholarship to finish Masters in the United States for honor students" – J.U.S.T - 2000
- "A 2-years scholarship program, for honors students, to support 3 years of the PhD" – J.U.S.T 2002.

References:

Furnished upon request