Mahmoud Alrefaei, Ph.D

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EDUCATION	**PhD in Mathematics and Industrial Engineering (Operations Research), University of Wisconsin-Madison, Madison, Wisconsin, USA. August 1997.** **M.A. in Mathematics, University of Wisconsin-Madison, Madison, Wisconsin, USA. June 1997.** **M.Sc. in Mathematics, Yarmouk University, Irbid, Jordan. August 1985.** **B.Sc. in Mathematics, Yarmouk University, Irbid, Jordan. August 1983.**
EMPLOYMENT	**Academic Experience** **Sep 2017 – Present** Vice Dean of Graduate Studies, Jordan University of Science and Technology, Irbid, Jordan. **Sep 2013 – Sep 2017** Vice Dean of Science and Arts, Jordan University of Science and Technology, Irbid, Jordan. **December 2014 – Present** Professor, Department of Mathematics and Statistics, Jordan University of Science and Technology, Irbid, Jordan. **September 2012 – December 2014** Associate Professor, Department of Mathematics and Statistics, Jordan University of Science and Technology, Irbid, Jordan **September: 2006 – September 2012** Associate Professor: Department of Mathematics, statistics, and Physics , Qatar University, Doha, Qatar. **September 2005 – September 2006** Chairman, Department of Mathematics and Statistics, Jordan University of Science and Technology, Irbid, Jordan. **Feb 2005 – September 2006** Associate Professor: Department of Mathematics and Statistics, Jordan University of Science and Technology, Irbid, Jordan. **September 2002 - September 2004** Assistant Dean of Science and Arts, Jordan University of Science and Technology, Irbid, Jordan. **September 2002 - Sept 2006** Adjunct Professor: Department of Computer Sciences and Information systems, Jordan University of Science and Technology, Irbid, Jordan. **September 2002 - Sept 2006** Adjunct Professor: NYiT Middle East Branch,

	Amman, Jordan. **June 1997 – Feb 2005** Assistant Professor, Department of Mathematics and Statistics, Jordan University of Science and Technology, Irbid, Jordan. **January 1996 - June 1997** Teaching and Research Assistant, School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, GA, USA. **August 1993 - December 1995** Teaching and Research Assistants, Department of Mathematics, University of Wisconsin-Madison, Madison, WI, USA. **August 1989 - August 1991** Teaching Assistant, Department of Basic Sciences, Jordan University of Science and Technology, Irbid, Jordan. **October 1987 – August 1989** Full time Lecturer, Department of Natural Science, Mu'Tah University, Karak, Jordan.
SCIENTIFIC AND PROFESSIONAL SOCIETY MEMBERSHIPS	• Member of the Jordan Mathematical Society • Member INFORMS • Member of the Mathematical Association of America • Member of the Jordanian Alumni of North America (JANA)
HONORS AND AWARDS	• Royal Prize, Ranked the first among graduates in Master of Science in Mathematics from Yarmouk University 1986. • Scholarship from Jordan University of Science and technology 1991 – 1997 to complete the PhD. • Research and Teaching scholarship from University of Wisconsin-Madison Sep. 1993- Dec. 1995 • Research Assistantship Georgia Institute of Technology Dec 1995 – June 1997
GRANTS	• NPRP 4th cycle a total of (313,000 USD) funded by Qatar National Research Fund (QNRF), 2011. • UREP 8th cycle a total of (30,000 USD) funded by Qatar National Research Fund (QNRF), 2010. • Constructing computer labs at the Department of Mathematics and Statistics for teaching purposes and statistical consultation. Amount of proposal is (216,000 USD) funded by the Jordan National Center for Human Resources Development, 2004.
International Collaboration	• **Erasmus Mundus PEACE II** Project, 2013 – 2017: This project was funded by the European Union, which includes 10 universities from Europe and 10 universities from the Middle East (Jordan, Syria, Lebanon and Palestinian Territories). The program includes about 156 students and staff motilities between these universities with a budget of 3 million Euros. • **Erasmus +** (International Credit Mobility (ICM) Program) Several International Credit Motilities were flown from JUST to Europe through these programs, these include: ▪ **Erasmus + with University of Santiago De Compostela**, **Spain** 2016 - 2018, 2017 – 2019, 2018 - 2020

	▪ **Erasmus + with University of Minho, Portugal (UMOVEME Program)** 2016 -2018, 2017 – 2019, 2018 – 2020 ▪ **Erasmus + with a consortium of Portugal universities (JAMIES Program) 2017 – 2019, 2018 – 2020** ▪ **Erasmus + with Masaryk University, Czech republic** 2016 -2018, 2017 – 2019. **I have participated in several meetings for International collaboration including** • Spain October 2013, • France April 2014, • Lebanon November 2017, • Spain February 2018 and • Spain November 2018.
COMMITTEE PARTICIPATIONS	**At Jordan University of Science and Technology** **University Level:** • Scientific Research Committee, Sep. 2015 – Sep. 2016, Member, (JUST). • Accreditation and Quality Assurance Committee, Sep. 2015 – Sep. 2016, (JUST). • Accreditation and Quality Assurance Committee, April. 2018 – Present, (JUST). • Graduate Studies Committee, Sep. 2013 – Sep. 2015, (JUST). • Graduate Studies Committee, Sep. 2017 – Present (JUST). • ISO Committee January 2017, July 2018 • Several Ad Hoc committees **Faculty Level:** • Coordinator for the Web Committee for 5 years • Coordinator of Scientific day Committee for 2 years as coordinator • Coordinator of the classes schedule Committee for 2 years • Coordinator of the tenders committee for 2 years • Quality Control Committee • Internet and data management • Coordinator of recruitment committee rules • Graduate Studies Committee, 2013 – 2015, Coordinator (JUST) • Several Promotions Committees, (JUST) • Quality Assurance and Accreditation Committee, 2012 – 2105, Coordinator, JUST. • Several Ad Hoc Committees including promotions and recruiting committees. • Several Promotions committees 2012/2013. • Several Recruitment committees 2012/2013. • Scientific Research Committee, 2015 – 2017

Department level:

- Alumni follow up Committee for 2 years
- Social and Cultural Committee for 3 years
- Scientific research Committee for 7 years
- Graduate studies Committee 3 years
- Library Committee for 2 years
- Classes schedule Committee for 3 years
- The Web Committee for 2 years
- Scientific day Committee for one year
- Quality Control Committee for one year
- Several Ad Hoc Committees including promotions and recruiting committees.
- Several Promotion committees 2012/2013
- Hiring committee 2012/2013
- Quality Assurance committee 2012/2013

At Qatar University:

University level:

- Articulation Committee between Qatar University and the Community College of Qatar
- CAS – CENG Joint Committee, 2011 – 2012 (Qatar University).
- Restructuring the Foundation Program: The Math task Force committee (Qatar University).
- Credit Waiver Committee (Qatar University).

College Level:

- CAS Programs Review committee, 2006-2007, member (Qatar University).
- Web page development committee, 2006 – 2007, coordinator (Qatar University)
- Administrative Units Performance Review System 2009 – 2010, Coordinator (Qatar University).
- Enhancing the Math and Physics Courses, Coordinator (Qatar University).
- The Science Courses Schedule Committee, Coordinator (Qatar University).

Department Level:

- Academic committee, 2006 – 2007, member
- Programs development committee, 2006, 2007, member
- Labs committee, 2006 – 2007, member
- Promotional committees, 2006 – 2007, member
- Recruitment Committee, 2006 – 2007 coordinator, 2010 –

	2011 member • Schedule committee, 2007 – 2008, member, 2008 – 2009, 2009 – 2010, 2010 – 2011 and 2011 – 2012 member. • Budget committee, 2009 – 2010, 2010 – 2011 and 2011 – 2012, coordinator • Strategic plan committee, 2009 – 2010, 2010 – 2011and 2011 – 2012, member
UNIVERSITY AND PUBLIC SERVICE ACTIVITIES	• MSc Students: 15 as supervisor. • MSc Thesis: member for more than 25 graduate students over the past years. • PhD Thesis Executive Advisor for 1 student from University of Science, Malaysia.
Courses Taught	***Graduate Level:*** • Math 777 Simulation and Modeling. • Math 770 Linear Programming • Math 794: Special Topics in Operations Research • CSCI 635, EENG 635: Probability and Stochastic Process (Graduate level taught at the NYiT Middle East Branch of Amman for Computer science and Electrical Engineering Students) ***Undergraduate Level:*** • Math 492: Research on Applied Mathematics (Math Department JUST). • Math 491: Special Topics in Applied Mathematics • Math 475: Optimization Theory (Math Department JUST) • Math 472: Seminar in Operations Research (Math Department JUST) • Math 470: Probabilistic Models in Operations Research (Math Department JUST) • Math 454: Modeling and Simulation Research (Math Department JUST) • Math 416: Seminar in Programming and Analysis (Math Department JUST) • Math 412: Computer Simulation (Math Department JUST) • CPE 412: Computer Simulation and Modeling (Taught at the Department of Computer Engineering at JUST) • Math 371: Linear Programming (Math Department JUST) • Math 368: Operations Research (I) (Math Department , Qatar University) • Math 468: Operations Research (II) (Math Department, Qatar University) • Math 499: Graduation Project for Mathematics Students (Math Department, Qatar University) • Math 241: Discrete Mathematical Structure (for Computer

	sciences and computer Engineering majors) • CIS 491: Graduation Project, Focused (Taught at the Department of Computer Science and Information Technology at JUST) • Calculus I, II, III (Math Dept. Qatar University and JUST) • Finite Mathematics (Taught at NYiT) • Stat 101 (Taught at Yarmouk University)
Quality Assurance Involvements	• I am a Member of the Central Accreditation and Quality Assurance Committee (JUST) 2015 – 2017, 2017 -present. The committee establishes the policies and criteria to measure the academic programs quality. It also puts plans for the academic programs to get accredited from reputed international bodies. • I am the Coordinator of the Quality Assurance Committee at the college of Science and Arts at Jordan University of Science and Technology (JUST) 2013 - 2017. I am responsible about implementing the quality assurance criteria on the programs offered by the college. • I have coordinated the strategic plan of the college of sciences arts at JUST 2015-2016. • I am a member of a committee for preparing the ISO procedures for the academic units at JUST, 2017, 2018 • I am the Coordinator of the ABET Accreditation Committee at the college of Science and Arts 2015 - 2017. The college is now seeking accreditation from ABET Applied Science Commission. I was responsible about putting the time line and assure that all criteria of ABET are met. • I have prepared the strategic plan of the math department at JUST, 2006. • I was involved in preparing the strategic plan of the department of Mathematics, Statistics and Physics at **Qatar University** 2006 - 2012. • A member of the College of Arts and Sciences Academic Planning Program Review Committees, 2006-2007 at **Qatar University.** The committee was responsible for reviewing the academic programs at the College of Arts and Sciences (CAS) at Qatar University to recommend the future direction for those programs such as; maintain, enhance, reorganize, or suspend any of the available programs or suggesting new programs. The review was based on three measures; Centrality (roles they fill in terms of research and service to the University and community), The academic Quality of the program (curriculum, quality of faculty, philosophy of pedagogy followed, standards adopted, number and quality of graduates produced, research output of faculty, etc.), The extent of demand on these programs from a student and market perspectives and whether they are viable and competitive. It took one year long to review 11 programs of CAS and the recommendations were submitted to the

	dean of the college of CAS. Coordinator of the Administrative Units Performance Review System (AUPRS) at the college of Arts and Sciences at **Qatar University**. 2009 – 2010. I was in charge of assessing all the administrative units in the college including the academic departments. The units have identified their mission, objectives and an action plan to achieve these objectives. After one year data were collected and analyzed from each unit. Based on some specified measures, the objectives were evaluated and recommendations to improve the units are reported to the dean of CAS.
Quality Assurance Review Activities	• In 2016, I was a member of the review panel for the math program at **Sultan Qaboos University** who are planning to apply for the ASIIN accreditation program based in Germany. In this panel, we have received the Self Study Report (SSR) and sent a primary report based on it. We then visited SQU and investigated all evidences included in the SSR and then we have sent our final report that includes strengths, area of improvement and final recommendation. • I was involved in reviewing the math program at Yarmouk University based on the request of the dean of Science at **Yarmouk University**.
PUBLICATIONS	1. **Alrefaei, M. H.** and S. Andradóttir, A new search algorithm for discrete stochastic optimization. In *Proceedings of the 1995 Winter Simulation Conference*, ed. C. Alexopoulos, K. Kang, W. R. Lilegdon, and D. Goldsman, 236-241. Institute of Electrical and Electronics Engineers, Piscataway, New Jersey, 1995. 2. **Alrefaei, M. H.** and S. Andradóttir, Discrete stochastic optimization via a modification of the stochastic ruler method. In *Proceedings of the 1996 Winter Simulation Conference*, ed. J. M. Charnes, D. M. Morrice, D. T. Brunner, and J. J. Swain, 406-411. Institute of Electrical and Electronics Engineers, Piscataway, New Jersey, 1996. 3. **Alrefaei, M. H.** and S. Andradóttir, Accelerating the convergence of the stochastic ruler method for discrete stochastic optimization. In *Proceedings of the 1997 Winter Simulation Conference*, ed. S. Andradóttir, K. Healy. 352-357 Institute of Electrical and Electronics Engineers, Piscataway, New Jersey, 1997. 4. **Alrefaei, M. H.** and S. Andradóttir, A simulated annealing algorithm with constant temperature for discrete stochastic optimization. *Management Science,* Vol. 45(5): 748-764, 1999. 5. **Alrefaei, M. H.** and S. Andradóttir, A modification of the stochastic ruler method for discrete stochastic optimization. *European Journal of Operational Research.* Vol. 133: 160-182, 2001. 6. **Alrefaei, M. H.**, A Method for optimizing admission control of a Voice

Multihop radio network. *Proceedings of the 4th St. Petersburg Workshop on Simulation*, ed. S. M. Ermakov, Yu. N. Kashtanov, and V. B. Melas. St. Petersburg, Russia. 133-138, 2001.

7. **Alrefaei, M. H.**, A two-phase method for selecting the best-simulated system. In *The Proceedings of the 2001 International Arab Conference on Information Technology ACIT 2001*. Jordan University of Science and Technology, Irbid, Jordan. 2001.

8. **Alrefaei, M. H.**, Stochastic optimization using the standard clock simulation. *International Journal of Applied Mathematics* Vol. 8: 317-333, 2002.

9. **Alrefaei, M. H.**, A technique for simulation optimization. The Fourth Middle East Symposium on Simulation and Modeling (MESM) Sharjah, UAE. Sept. 2002.

10. **Alrefaei, M. H.**, A stopping rule for stochastic simulated annealing with constant temperature. *WSEAS Transactions on Circuits and Systems*. 2: 517-522, 2003

11. **Alrefaei, M. H.** and A. J. Alawneh, Selecting the best stochastic system for large scale problems in DEDS. *Mathematics and Computers in Simulation*. Vol. 64: 237-245, 2004.

12. **Alrefaei, M. H.** and Hossam Abdul-Rahman, two sequential algorithms for selecting one of the best simulated systems. *WSEAS Transactions on Systems.* Vol. 3 2517-2522, 2004.

13. **Alrefaei, M. H.** and S. Andradóttir. Discrete stochastic optimization using variants of the stochastic ruler method. *Naval Research Logistics,* Vol. 52(4) 344-360, 2005.

14. **Alrefaei, M. H.** and A. J. Alawneh. Solution quality of random search methods for discrete stochastic optimization. *Mathematics and Computers in Simulations,* Vol. 68(2) 115–125, 2005.

15. **Alrefaei, M. H.**, A simulated annealing applied for optimizing a voice multihop radio network. *Applied Mathematics and Computation,* Vol. 167(1) 496-507, 2005.

16. **Alrefaei, M. H.** and A. Abubaker, Optimal Computing Cost Budget Allocation for solving Buffer Allocation Problem. *The Proceeding of International Symposium on Intelligence Techniques in Computer Games and Simulations,* Japan, 1-2 March 2007.

17. **Alrefaei, M. H.**, Simulated annealing applied for multi-objective simulation optimization*, The Proceedings of The Conference on Design, Simulation, Product Development and Optimization,* University Sains,

Penang, Malaysia, pp. 134 – 140, 2007.

18. **Alrefaei, M. H.** and Mohammad AlMomani. Subset selection of best simulated systems, Journal of the Franklin Institute Vol. 344(5): 495–506, 2007

19. **Alrefaei, M. H.**, and Hossam Abdul-Rahman. An adaptive Monte Carlo integration algorithm with general division approach. *Mathematics and Computers in Simulations,* Vol. 79(1): 49-59, 2008.

20. **Alrefaei, M. H.**, and Hossam Abdul-Rahman. Adaptive Monte Carlo Integration, *The Proceedings of the third International Conference of Mathematical Sciences, ICM08*, Al Ain, UAE, Mar. 3-6, 2008.

21. Ali Diabat, **M. H. Alrefaei** and ITsung Tsai. A Lagrangian-Relaxation based heuristic approach for the design of a large-scale logistics problem. *In the proceedings of MIC 2009 VIII Metaheuristic International Conference*, Hamburg, July 13-16, 2009.

22. **Alrefaei, M. H.**, and Ali Diabat. A Simulated Annealing Technique for Multi-Objective Simulation Optimization. *Applied Mathematics and Computation,* Vol. 215(8) 3029-3035, December 2009.

23. **Alrefaei, M. H.**, Alaa Abu Nahiah, Abeer Abu-Lebda, Danya Khayal. Simulating and Selecting the best Appointment System of an Outpatient Department. *In the Proceedings of the Annual International Conference on Operations Research and Statistics, ORS* 2011, Penang, Malaysia, pp. 100 – 105, 2011.

24. Mohammad H. Almomani and **M. H. Alrefaei.** A Three-Stage Procedure for Selecting a Good Enough Simulated System. *Journal of Applied Probability and Statistics*, Vol. 6(1&2) 13 – 27, 2012.

25. Mohammad H. Almomani, Rosmanjawati Abdul Rahman, Adam Baharum and **M. H. Alrefaei.** A Selection Approach for Solving the Buffer Allocation Problem. *International Journal of the Physical Sciences*. Volume 7(3) 713 – 722, 2012.

26. **Alrefaei, M. H.**, and Ali Diabat: A Simulated Annealing with Ranking and Selection for Stochastic Optimization, *Advanced Materials Research*, Vol. 488 – 489, 1335 – 1340, 2012.

27. Devica Kannan, Ali Diabat, **M. H. Alrefaei**, Kannan Govindan and Geng Yong, A carbon footprint based reverse logistics network design model, *Resources, Conservation and Recycling*, Vol. 67, 75–79, October 2012.

28. **Alrefaei, M. H.**, Diabat A., Alawneh A., Al-Aomar R., Faisal M . N., Simulated Annealing for Multi Objective Stochastic Optimization. *International Journal of Science and Applied Information Technology*

(IJSAIT), Vol. 2 (2), 18 – 21, 2013.

29. Faisal M. N., **M. H. Alrefaei.**, Alawneh A., Al-Aomar R. and Diabat A. Supply Chain Performance Improvement by Integrating Sustainability in Supplier Selection for a Steel Producer. *In the Proceedings of the 3rd International Conference on Production and Industrial Engineering CPIE-2013,* JALANDHAR, INDIA, pp. 586 – 591, March 2013.

30. Diabat A., Al-Aomar R., **M. H. Alrefaei**, Alawneh A., Faisal M. A Framework for Optimizing the Supply Chain Performance of a Steel Producer. *In the Proceedings of the 15th International Conference on Enterprise Information Systems* 04 - 07 July 2013 Angers - France, pp. 554-562, July 2013.

31. Al-Aomar R., **M. H. Alrefaei**, A. Diabat, M. N. Faisal and A. Alawneh. Using Simulation to Assess the Performance of a Large-scale Supply Chain for a Steel Producer. *In the Proceedings of the 2014 International Conference on Mathematical Methods, Mathematical Models and Simulation in Science and Engineering,* Switzerland, 22 – 24 February, 2014. pp. 156 – 160, 2014

32. Alawneh A., **M. H. Alrefaei**, A. Diabat, R. Al-Aomar, and M. N. Faisal. An LP Model for Optimizing a Supply Chain Management System for Steel Company. *In the Proceedings of the International Multi Conference of Engineers and Computer Scientists 2014 Vol II*, 12 – 14 March 2014, pp. 1162 -1164 , Hong Kong, 2014.

33. Abubaker A., Baharum A. and **M. H. Alrefaei**, Good solution for multi-objective optimization problem. AIP Proceedings, Vol. 1605, 1147- 1152, 2014.

34. **Alrefaei, M. H**., Ameen Alawneh and Mansur Hussain. Fuzzy Linear Programming for Supply Chain Management in Steel Industry; Applied Mathematical Sciences Vol. 8(103), pp. 5105 – 5114, 2014.

35. Abubaker A., Baharum A. and **M. H. Alrefaei**, Cooling Schedule for Multi-Objective Simulated Annealing Algorithm. AIP *Proceedings*, Vol. 1613, 55- 61, 2014.

36. **Alrefaei, M. H.**, and Ali Diabat. Modelling and Optimization of Outpatient-Appointment Scheduling; *RAIRO - Operations Research,* Vol. 49 (3), pp. 435–450, 2015.

37. Abubaker A., Baharum A. and **M. H. Alrefaei**, Automatic Clustering Using Multi-objective Particle Swarm and Simulated Annealing*. PLoS ONE*, Vol. 10(7): e0130995. doi:10.1371/journal.pone.0130995, 2015.

38. Mohammad H. Almomani and **M. H. Alrefaei**. Ordinal Optimization with Computing Budget Allocation for Selecting an Optimal Subset. *Asia-*

Pacific Journal of Operational Research, Vol. 33, No. 02, 1650009 (2016). http://www.worldscientific.com/doi/pdfplus/10.1142/S0217595916500093.

39. M. Al-Salem, Ali Diabat, Doraid Dalalah, and **M. H. Alrefaei**. A closed-loop supply chain management problem: Reformulation and piecewise linearization, *Journal of Manufacturing System,* 40, Part 1, 1 – 8, 2016.

40. Abubaker A., Baharum A. and **M. H. Alrefaei**, Multi-Objective Particle Swarm Optimization and Simulated Annealing in Practice, *Applied Mathematical Sciences*, Vol. 10, 2016, no. 42, 2087 – 2103.

41. M. Al-Salem, M. Almomani, **M. H. Alrefaei**, A. Diabat. On the Optimal Computing Budget Allocation Problem for Large Scale Simulation Optimization, *Simulation Modelling Practice and Theory*, Vol. 71, February 2017, 149–159.

42. Mohammad H. Almomani **M. H. Alrefaei** and S. Almansour, A Combined Statistical Selection Procedure Measured by the Expected Opportunity Cost, Arabian Journal for Science and Engineering, Vol. 43(6), June 2018, 3163-3171. https://doi.org/10.1007/s13369-017-2865-8

43. **M. H. Alrefaei**, M. H. Almomani, and S. N. Alabed Alhadi, Asymptotic Approximation of the Probability of Correctly Selecting the Best Systems. AIP Conference Proceedings 1991, 020022, doi: 10.1063/1.5047895, 2018

44. **M. H. Alrefaei** and T. A. Sulaiman, Designing Appointment System by Multi Objective Simulated Annealing. AIP Conference Proceedings 1991, 020007, doi: 10.1063/1.5047880, 2018

45. M. Tuffaha and **M. H. Alrefaei,** Arithmetic Operations on Piecewise Linear Fuzzy Number. AIP Conference Proceedings 1991, 020024, doi: 10.1063/1.5047897, 2018

46. Mohammad H. Almomani **M. H. Alrefaei** and S. Almansour, A Method for Selecting the Best Performance Systems, International Journal of Pure and Applied Mathematics, to appear, 2018.

47. Abubaker A., Baharum A. and **M. H. Alrefaei**, A pruned Pareto set for multi-objective optimization problems via particle swarm and simulated annealing, *International Journal of Operational Research*, to appear, 2019.

Workshop Delivered

1. Workshop on Using WebWork: Qatar University, Al Sharjah University and UAE University
2. Training on Convex Optimization for the project "*Towards concerted sharing:*

PROFESSIONAL DEVELOPMENT ACTIVITIES	*development of a regional water economy model in the Jordan River Basin"* JUST, Jordan , August 18 – 29, 2013. **Quality Assurance Workshops:** 3. Quality Assurance criteria and accreditation for academic programs. Qatar University 28/4/2015. 4. ABET Accreditation Workshop Jordan University of Science and Technology. 28/1/2016. 5. The Criteria for the General and Specialized Accreditation for Jordan Universities at JUST June 2016. **Other Workshops** 6. Accreditation Process and Capacity Calculation Workshop, Jordan University of Science and Technology. June 5, 2016. 7. ABET Accreditation Workshop Jordan University of Science and Technology. 28/1/2016. 8. Quality Assurance criteria and accreditation for academic programs. Qatar University 28/4/2015. 9. Workshop on WeBWork for Mathematics and Statistics Courses, 23 – 24 June 2008. 10. Mathematica Workshop, Qatar University, Nov. 5 – 6/11/2008 11. Virtual Calculus Tutor, Bangkok, Thailand, December 18, 2008. 12. A Workshop Increasing Critical Thinking in the use of Presentation Software. College of Arts and Sciences, Qatar University, Feb 21, 2008. 13. Blackboard (2). Office of Faculty and Instructional Development, Qatar University, Feb 24-26, 2008. 14. A Workshop on Using the Blackboard System for Delivering University Courses. Office of Faculty and Instructional Development, QU, April 8 - 12, 2007. 15. Programming in Mathematica. Wolfram Research Group, Muscat, Oman, April 1st, 2007. 16. WebWork Workshop. Sultan Qaboos University, Muscat, Oman, March 31st, 2007. 17. Business Math Workshop. Sultan Qaboos University, Muscat, Oman, March 31st, 2007. 18. A Workshop on Open On-Line Learning. Department of Mathematics and Statistics, QU, March 5 - 6, 2007. 19. A Workshop on Interactive Learning Strategies. Office of Faculty and Instructional Development, QU, Feb. 4 - 6, 2007.

	20. A Workshop on Preparing Course Portfolio. Office of Faculty and Instructional Development, QU, Jan. 29 - 31, 2007. 21. A Workshop on Interactive Board. Office of Faculty and Instructional Development, QU, Jan. 10^{th}, 2007. 22. E-Learning Based on Moodle. Jordan University of Science and Technology, July 2-12, 2006. 23. A First course in Mathematica, Wolfram Research Group, Jordan University of Science and Technology, Feb 19 -20, 2006 24. Workshop on the American Teaching Methods (Toward Effective Instruction) New York Institute of Technology Amman December 27 – 28, 2004. 25. The Fourth Workshop on Educational Technology (Measurement's and Evaluation), Jordan University of Science and Technology, January 24 – 26, 1998. 26. The Twelfth Workshop of Educational Technology. Jordan University of Science and Technology, September 6 – 10, 1997.
Conference Organization	1. Member f the organizing committee for the Second International Conference on Advanced Materials (ICAM 2017), JUST 10 – 13 July, 2017. 2. Coordinator of the First Scientific Jordanian Tunisian Forum 2016 (SJTF'1), JUST 29—31 March 2016. 3. Member f the organizing committee for the International Conference on Advanced Materials (ICAM 2015), JUST 27 – 29 April, 2015. 4. Member of the organizing committee for the Third International Conference of Mathematical Sciences, ICM08, Al Ain, UAE, 3-6, 2008. 5. Director of the CIMPA Summer School of Mathematical Modeling for Financial Markets. Jordan University of Science and Technology, September 11 – 22, 2005. 6. Member of the organizing committee of the Summer School: Partial Differential Equations Arising From Geometry. Damascus University, May 15 – 27 2004. 7. Member of the organizing committee of the Seventh Scientific day of the Faculty of Science and Arts, May 2004 8. A member of the 4th WSEAS International Conference on Simulation, Modeling, and Optimization (ICOSMO2004) Izmir, Turkey 13 – 16, 2004. 9. Chair of the Sixth Scientific day of the Faculty of Science and Arts, May 23 – 24, 2003.

	10. Chair of The Math Section in the fifth scientific day of the Faculty of Science and Arts, May 2002.
Conference Participation	1. A new search algorithm for discrete stochastic optimization. 1995 Winter Simulation Conference. Washington D.C., USA. 1995. 2. An approach for accelerating the convergence of discrete stochastic optimization procedures." INFORMS Fall 1995 National Conference in New Orleans, USA. 1996. 3. Discrete stochastic optimization via a modification of the stochastic ruler method. 1996 Winter Simulation Conference. San Diego, USA. 1996. 4. A simulated annealing algorithm with constant temperature for discrete stochastic optimization." INFORMS Fall 1996 National Conference in Atlanta, USA. 1996. 5. Accelerating the convergence of the stochastic ruler method for discrete stochastic optimization. 1997 Winter Simulation Conference. Atlanta, USA.1997 6. Optimization under uncertain conditions. The Second Annual Scientific Day of the Faculty of Science and Arts. JUST, Irbid, Jordan. May 1999 7. Some developments of random search methods for discrete stochastic optimization. The XX International Seminar in Stability of Stochastic Processes. Lublin, Poland. Sept. 1999. 8. Stochastic optimization using the standard clock technique. 8th Silivri-G. Magusa Workshop on Stochastic Analysis and Related Topics. North Cyprus. Sept. 2000. 9. Optimizing multihop radio network problems. The Fourth Annual Scientific Day of the Faculty of Science and Arts. JUST, Irbid, Jordan. May 2001. 10. A method for optimizing admission control of a voice multihop radio network. 4th St. Petersburg Workshop on Simulation. St. Petersburg, Russia. June 2001. 11. A two-phase method for selecting the best-simulated system. International Arab Conference on Information Technology ACIT 2001, Irbid, Jordan. May 2001. 12. Selecting the best stochastic system. With Ameen Alawneh.

	Operations Research Conference 2002, Klagenfurt, Austria. Sept. 2002. 13. Simulated annealing algorithm for continuous stochastic optimization. Operations Research Conference 2002, Klagenfurt, Austria. Sept. 2002. 14. A technique for simulation optimization. The Fourth Middle East Symposium on Simulation and Modeling (MESM) Sharjah, UAE. Sept. 2002. 15. A stopping rule for stochastic simulated annealing with constant temperature. The 3rd WSEAS International Conference on Simulation, Modeling and Optimization (ICOSMO 2003) Rethymno, Crete Island, Greece, October 13-15, 2003. 16. On-line learning project for science courses. The Seventh Annual Scientific Day of the Faculty of Science and Arts. JUST, Irbid, Jordan. May 2004. 17. Two sequential algorithms for selecting one of the best simulated systems. The 4th WSEAS International Conference on Simulation, Modeling and Optimization (ICOSMO 2004). Izmir, Turkey, September 13-16/2004. 18. Subset Selection of Best Simulated Systems. First International Conference on Modeling, Simulation and Applied optimization (ICMSAO 2005). American University of Sharjah, UAE Feb 1-3/ 2005. 19. Optimal Computing Cost Budget Allocation for solving Buffer Allocation Problem. International Symposium on Intelligence Techniques in Computer Games and Simulations, Japan, 1-2 March 2007. 20. Learning Technologies and Mathematics Middle East Conference, Sultan Qaboos University, Muscat, Oman March 31–April 2, 2007 21. Modeling & Simulation in Practice. The First Forum of Physics and Mathematical Sciences. College of Arts and Sciences, QU, April 25 – 26th, 2007. 22. Simulated annealing applied for multi-objective simulation optimization. Conference on Design, Simulation, Product Development and Optimization, University Sains, Penang, Malaysia, Dec. 10 - 11, 2007. 23. Adaptive Monte Carlo Integration, The Third International Conference of Mathematical Sciences, ICM08, Al Ain, UAE, 3-6 March, 2008. 24. Using WeBWork at Qatar University, The 13th Asian Technology Conference in Mathematics, ATCM 2008, Bangkok, Thailand, 15-19

	December, 2008. 25. A Combined Procedure for Selecting the Best Simulated System. The 2009 CORS/INFORMS International Meeting in Toronto, Canada, June 14- 17, 2009. 26. Selecting a good enough simulated system. The First International Conference on Mathematics and Statistics AUS-ICMS '10. American University of Sharjah, UAE, 18 – 21 March 2010. 27. Adaptive Balanced Algorithm for Continuous Stochastic Optimization. Applied Mathematics International Conference 2010 (AMIC2010). Kuala Lumpur, Malaysia, 22 – 24 June 2010. 28. Multi-Objective Optimization Procedure using Ranking and Selection. International Conference on Mathematical Sciences. Bolu, Turkey, 23 – 27 November 2010. 29. Simulating and Selecting the best Appointment System of an Outpatient Department. The Annual International Conference on Operations Research and Statistics, ORS 2011, Penang, Malaysia, 7 - 8 April 2011. 30. A Simulated Annealing with Ranking and Selection for Stochastic Optimization. The 2012 International Conference on Manufacturing and Industrial Engineering (ICMIE 2012), Singapore 26 – 28 February 2012. 31. Simulated Annealing for Multi Objective Stochastic Optimization. The International Conference on Computing, Technology, and Engineering (ICCTE 2013), Dubai, 11- 13 March 2013. 32. Optimizing Qatar Steel Supply Chain Management System. Qatar Foundation Annual Research Conference, Qatar 24 – 25 November 2013. 33. The Second International Conference on Mathematics and Statistics AUS-ICMS'15, American University at Sharjah, UAE, 2 – 5 April, 2015. 34. Arab Expatriate Scientists (AES) Forum. Doha, Qatar 21 March 2016. 35. Qatar Annual Research Conference (ARC). Doha, Qatar 22 – 23 March, 2016. 36. Designing Health care appointment systems using GA and SA. The Computational Management Science Conference (CMS2016), Salamanca, Spain, May 31 – June 2nd, 2016. 37. Fully Fuzzy Linear Programming. The International Workshop on

	Mathematical Methods in Engineering (MME2017), Cankaya University, Ankara Turkey, April 27 – 29, 2017. 38. Asymptotic Approximation of the Probability of Correctly Selecting the Best Systems. International Conference on Mathematics and Related Sciences (ICMRS 2018), Antalya Turkey, April 30 – May 4, 2018 39. Designing Appointment System by Multi Objective Simulated Annealing. International Conference on Mathematics and Related Sciences (ICMRS 2018), Antalya Turkey, April 30 – May 4, 2018 40. Arithmetic Operations on Piecewise Linear Fuzzy Number. With Marwa Tuffaha. International Conference on Mathematics and Related Sciences (ICMRS 2018), Antalya Turkey, April 30 – May 4, 2018
Journal Review Activities	• Applied Soft Computing • Journal of Manufacturing Systems • IIE Transactions • European Journal of Operations Research • Journal of the Franklin Institute • Computers & Operations Research • Jordan Journal of Mathematics • Journal of Computational and Applied Mathematics • International Journal of Simulation and Process Modeling • International Journal of Modeling, Simulation, and Scientific Computing (IJMSSC) • WSEAS Transactions • Winter Simulation Conference • International Journal of Production Economics • Simulation Modeling Practice and Theory • Applied Mathematics and Computation • Zentralblatt MATH reviewer
Referees	Will be given upon request