Taisir M. Eldos, Ph.D.

Professor of Computer Engineering
Jordanian Citizen & Canadian Permanent Resident
Born July 30, 1958 - Jordan

Contact Information

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Professional Profile

A professor of computer engineering with vast industrial and academic experience; design engineer, team leader, production manager, director of engineering, computer and information technology firms, and a professor, researcher and department chairman in prominent universities. While in academia, I taught basic, intermediate, senior, and master level courses with focus on hardware and software interaction, supervised many master theses and senior graduation projects, and headed many committees for curricula design and program accreditation, established and chaired departments in many universities. Active in professional growth and development, highly skilled in getting students involved in the learning process and use of new technologies, and directing staff towards achieving the program objectives. At the personal level, I am well organized, self-motivated, enthusiastic, dedicated and meticulous.

Education

1992 – 1996: Ph.D. Computer Engineering, University of Alabama in Huntsville, USA
1991 – 1992: M.S. Computer Engineering, University of Alabama in Huntsville, USA
1976 – 1981: B.S. Electronic Engineering, University of Menofia, Menof – Egypt

Experience

2011 – 2014: Chairman
              Department of Computer Engineering
              Salman bin Abdulaziz University (King Saud University Spin-off), Saudi Arabia
2008 – 2011: Chairman
              Department of Computer Engineering
              King Saud University, Saudi Arabia
2000 – 2002: Chairman
              Department of Computer Engineering
              Jordan University of Science and Technology, Jordan

Taisir M. Eldos, Ph.D.

2014 – 2015: Research Scholar
Department of Electrical and Computer Engineering
New Jersey Institute of Technology, New Jersey, USA

2012 – 2013: Research Associate
Faculty of Graduate Studies
University of Victoria, British Columbia, Canada

1996 – Now: Professor
Department of Computer Engineering
Jordan University of Science and Technology, Irbid - Jordan

1993 – 1996: Lecturer
Department of Electrical and Computer Engineering
University of Alabama in Huntsville, Huntsville - Alabama, USA

1992 – 1993: Research Assistant
Department of Electrical and Computer Engineering
University of Alabama in Huntsville, Huntsville - Alabama, USA

1991 – 1992: Teaching Assistant
Department of Electrical and Computer Engineering
University of Alabama in Huntsville, Huntsville - Alabama, USA

1989 – 1990: Director of Engineering
Microsystems International Co., Birmingham - Alabama, USA
Office Automation Systems: Small Hospitals, Clinics and Retail Stores

1987 – 1989: Production Manager
International Systems & Electronic Development Co., Amman - Jordan
Design, Construction, Testing and Packaging of Microprocessor Based Systems;
Bilingual Solutions for Computers, Terminals and Printers

1986 – 1987: Project Manager
International Systems & Electronic Development Co., Amman - Jordan
Reverse Engineering: Roadside Emergency Telephony

1985 – 1986: Project Manager
International Systems & Electronic Development Co., Amman - Jordan
Multiprocessor Based Systems; Intelligent Elevator Controllers

1983 – 1985: Design & Development Engineer
International Systems & Electronic Development Co., Amman - Jordan
Microprocessor Based Bilingual Solutions: Computers, Terminals and Printers

1981 – 1983: Course Author, Instructor and Laboratory Supervisor
Jordanian Armed Forces - Royal Corps of Signals, Amman - Jordan
Digital Logic and Communication Systems

Taisir M. Eldos, Ph.D.

Research Interest

- Computer Architecture and Design
- Algorithmically Specialized Engines
- Evolutionary Optimization Paradigms

Teaching Interest

- Digital Logic Design
- Computer Organization and Design
- Computer Architecture
- High Performance Computing, Parallel Processing and Computing
- Microprocessor Systems Design, Computer Interfacing
- Embedded Systems Design, Firmware Design
- Data Communication, Computer Networks
- Operating Systems, Real Time Systems

Skills

- Low-Level Languages: Intel, Zilog and Motorola Assembly Programming
- High-Level Languages: Parallel C and Matlab
- Rule-Based Languages: CLIPS
- CAD/CAM Systems: VLSI Design Tools, PCB Design Tools
- Applications: Multimedia Authoring, Web Design and Graphics, Productivity Software

Awards

- Hisham Hijjawi Prize for Applied Sciences, 2001
- National Dean's List 1993 - 1994, USA
- National Dean's List 1992 - 1993, USA
- Doctoral Scholarship, University of Alabama in Huntsville
- Doctoral Sponsorship, HKJ Government, Jordan University of Science and Technology
- Honor Degree 1980 -1981, Egypt

Affiliations

- Institute of Electrical & Electronic Engineers (IEEE)
- Computational Intelligence Society (CIS)
- Jordan Engineers Association (JEA)
- Arab Computer Society (ACS)

Fellowships and Research Funds

Year	USD	Source	Project
1991	50,000	UAH	Excellence Fellowship (over 5 years, plus tuition)
1992	40,000	JUST	Government Scholarship (over 4 years)
1998	8,000	JUST	Digital Elevation Model for GIS applications
2001	5,000,000	EUMEDIS	Mediterranean Virtual University, EUMEDIS
2008	3,750,000	KSU	Saudi Computing Grid Nucleus Project
2009	13,500	KU	KDD dataset optimization
2011	27,500	SAU	Routing Optimization in Sensory Networks
2011	12,600	SAU	Error-Correction-Code Allocation Using The Chemical Reaction Optimization Algorithm
2012	15,000	SAU	Localized Motion Ant Colony Optimization Algorithm
2012	15,000	SAU	Chemical Reaction Optimization Algorithm for PCB Drilling
2012	20,000	SAU	Using Multimode Polymer Optical Fiber for High Capacity Multi-Service In-House Networks in Saudi Arabia
2013	16,000	SAU	Performance Comparison of Chemical Reaction and Ant Colony Optimization Algorithms in Solving the Maximally Distant Codes Allocation Problem

Positions

2009/2010	Member, Scientific Council, SAU
2010/2011	Member, Scientific Council, SAU
2003/2004	Member, University Council, JUST
2001/2002	Member, Faculty Council (Computer & Information Technology), JUST
2000/2001	Member, Faculty Council (Computer & Information Technology), JUST
2001/2002	Chairman, Department of Computer Engineering, JUST
2000/2001	Chairman, Department of Computer Engineering, JUST
1999/2000	Member, Faculty Council (Engineering), JUST
1999/2000	Liaison Officer, Y2K National Task Force, NIC

Extracurricular Activities

- National and International Academic Accreditation: ABET & NCAAA Workshops
- Program Establishment: Curriculum Design, Faculty Recruitment, Resource Management
- Assessments Workshops
- European Union joint projects: Mediterranean Virtual University (MVU), Content Provider
- Teaching with Technology: Multimedia Authoring Workshops for Professors, Provider

Taisir M. Eldos, Ph.D.

- Member of Task Force, e-University Project at Jordan University of Science and Technology
- Reviewer for Journals, Conferences and Book publishers
- External Examiner, student projects in other state universities
- Member of Steering Committee, Computer Information Center
- Member, Technical Information Committee, King Abdullah University Hospital
- Trainer, Tester & QA Officer, UNESCO ICDL program
- Computer training programs, Ministry of Education Teachers & Arab Army Retirees
- Workshops & Seminars: e-Commerce, Automated Software Testing, Courseware Authoring, Curricula Design, Open Educational Resources and Licenses

Academic Activities & Services: National Committees

- National Y2K Task Force, Member & University Liaison
- National Committee for the Computer and Information Systems Certification, Member

Academic Activities & Services: University Committees

- Steering Committee, Center of Information & Computing
- Curriculum Evaluation and Development for Al Balqa Applied University
- MIS & HIS Specification Committee of King Abdullah University Hospital
- MIS & HIS Evaluation Committee of King Abdullah University Hospital
- MIS & HIS Tender Committee of King Abdullah University Hospital
- MIS & HIS International Site Visits Committee of King Abdullah University Hospital
- The e-University Committee
- King Saud University Appointments Committee
- Salman bin Abdulaziz University Scientific Council

Academic Activities & Services: Faculty Committees

- Scientific Day Committee, Member
- Graduate Studies Committee, Member
- Faculty Handbook Committee, Coordinator
- Laboratories Committee, Coordinator
- Accreditation Committee, Coordinator
- Graduation Projects Committee, Member
- Quality Assurance Committee

Academic Activities & Services: Department Committees

- Curriculum Committee, Coordinator

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- Research Committee, Coordinator
- Seminars Committee, Coordinator
- Laboratories Committee, Coordinator
- Training Committee, Coordinator
- Tenders Committee, Coordinator
- Appointment Committee, Coordinator
- Social Affairs Committee, Coordinator
- Graduate Studies Committee, Member
- Department Website Committee, Designer
- Students Affairs Committee, Member

Academic Activities & Services: External

- New York Institute of Technology, Computer Architecture for graduate students
- New York Institute of Technology, Advanced Microprocessor Systems for graduate students
- New York Institute of Technology, Computer Organization for undergraduate students
- New York Institute of Technology, Operating Systems for undergraduate students
- Yarmouk University, Advanced Microprocessor Systems for graduate students
- Yarmouk University, Software Engineering for undergraduate students
- Arab Open University, Telematics for undergraduate students
- Balqa Applied University, Supervising Graduation Projects

Publications: Master Theses

1. Process Migration in Distributed Virtual Systems, (Ra'ed Al Omari, 1996)
2. Deadlock Detection and Resolution in Distributed Database Systems, (Ahed Al Shanyour, 1997)
3. Handling Techniques for Page Duplication in Distributed Virtual Memory Environment, (Wael Al Qassas, 1997)
4. Handling Deadlocks in Distributed Virtual Memory Systems, (Amjad Odette Allah, 1997)
5. Co-scheduling Hardware and Software Pipelines, (Taisir Al Khdoor, 1998)
6. New Algorithm for Distributed Sorting in Distributed Systems, (Faisal Al Sa'ad, 1998)
7. K-processor Reliability Analysis of Large Scale Hierarchical SCI Ring-Based Networks, (Mo'ad Mowafi, 1998)
8. Mobile Robot Navigation Using Neuro-Fuzzy Systems, (Yahya Tashtoosh, 1998)
9. Digital Elevation Model Feature Extraction using Partially Compresses Data, (Wael Kayyali, 1998)
10. Fuzzy Maps for Mobile Robot Navigation Based on Ultrasonic Range Detection, (Omar Bani Melhem, 1998)

11. Recognition of Gestures in Arabic Sign Language Using Neuro-Fuzzy Systems, (Ala'a Halawani, 1999)

12. The Impact of DCF and PCF Protocols in Mobile Wireless LAN, (Osama Abu Rahmeh, 1999)

13. A Novel Router Architecture for High Performance Multiprocessor Systems, (Nabeel Hasasneh, 2000)

14. High Level Synthesis of Integrated Heterogeneous Multiprocessor Systems for DSP Apps, (Jihad Ghanim, 2000)

15. Artificial Neural Networks Approach for Finite Element Modeling Problems in EMag Eng., (Rafi Al Qasim, 2001)

16. EDN Approach to Broadcast in Wormhole Routed 2D Mesh Multicomputer Networks, (Issa Qabaja, 2001)

17. Performance Optimization of ART Neural Networks Using Genetic Algorithms, (Hussein Natsheh, 2007)

18. An Adaptive Genetic Algorithm for Solving the VLSI Placement Problem, (Rose Al Qasim, 2007)

19. A hybrid digital/analog dimming control for high performance visible light communication (Ola Aburje, 2015)

Publications: Journal and Conference Papers

1. Khalid Mayas, Taisir Abulnasr and Taisir Eldos, 1999. A Study of the Robustness of the M-Max NLMS Adaptive Algorithm. IEEE International Symposium on Circuits and Systems. Orlando - Florida, USA.

2. Taisir Eldos, Khalid Mayas and Taisir Abulnasr, 1999. Functional Memory Based Architecture for Running Sorting. IEEE International Symposium on Signal Processing Applications. Brisbane - Australia.

3. Adnan Shaout, Taisir Eldos, 2001. Scalable Automotive Processing System. Arab Conference on Information Technology. Irbid - Jordan.

4. Taisir Eldos, Khalid Mayas, Taisir Abulnasr, 2001. A Functional Memory Implementation of the M-Max NLMS Adaptive Algorithm. Canadian Journal of Electrical and Computer Engineering. Canada.

5. Adnan Shaout, Taisir Eldos, Najamuz Zamman, 2001. Scalable Autonic Processing Systems. International Journal of Computer Applications in Technology. United Kingdom.

6. Taisir Eldos, 2002. Arabic Text Data Mining: A Root Extractor for Dimensionality Reduction. International Conference on Applied Informatics. Innsbruck - Austria.

7. Taisir Eldos, 2003. Arabic Text Data Mining: A Root Based Hierarchical Indexing Model. International Journal of Modeling and Simulation. USA, Canada and Switzerland.

8. Adnan Shaout, Taisir Eldos, 2003. On The Classification of Computer Architecture. International Journal of Science and Technology. USA.

9. Taisir Eldos, 2006. Catastrophic Effects: A New Factor of Distributed Genetic Algorithms. International Conference on Modeling and Simulation. Kuala Lumpur - Malaysia.

10. Taisir Eldos, 2006. A New Migration Model for Distributed Genetic Algorithms. The 2006 International Conference on Scientific Computing. Las Vegas - Nevada, USA.

11. Hussein Al Natsheh, Taisir Eldos, 2007. Performance Optimization of ART Neural Networks Using Genetic Algorithms. First IEEE Symposium on Foundations of Computational Intelligence. Honolulu - Hawaii, USA.

12. Rose Al Qasim, Taisir Eldos, 2007. A Population Sizing Scheme for Genetic Algorithms. IEEE International Conference on Computer Systems and Applications. Amman - Jordan.

13. Taisir Eldos, Rasha Omari, 2008. A Unified Backward Approach to the Code Book Design Problem. IEEE International Conference on Electro/Information Technology. Ames - Iowa, USA.

14. Taisir Eldos, 2008. Distributed Genetic Algorithms: A Scheme for Genetic Drift Avoidance. The Journal of Electrical Engineering. Slovakia.

15. Taisir Eldos, Rose Al Qasim, 2009. Reversible Deformation Annealing: A New Variant of Simulated Annealing. The 2009 International Conference on Genetic and Evolutionary Methods. Las Vegas - Nevada, USA.

16. Taisir Eldos, 2009. Simulated Annealing with Deterministic Decisions. Journal of Computer Science, Science Publications. USA.

17. Taisir Eldos, Abdulaziz Almazyad, 2010. ART1 Training Parameters: Pretty Good Sets. Journal of Computer Science. USA.

18. Rustom Mamlook, et al, Taisir Eldos, Emad Abdulhadi, 2011. Fuzzy Logic Controller to Improve Parameters Affecting Turbines Power Generation. Clean Technology Environment Policy. Springer - Verlag. Germany & USA.

19. Taisir Eldos, Mohammed Khubeib, Aws Kanan, 2012. On the KDD'99 Dataset: Statistical Analysis for Feature Selection. Journal of Data Mining and Knowledge. India.

20. Taisir Eldos, 2013. Mutative Genetic Algorithms. Journal of Computing and Modeling. London - United Kingdom.

21. Rose Al Qasim, Taisir Eldos, 2013, An Efficient Cell Placement Using Gravitational Search Algorithms. Journal of Computer Science. USA.

22. Taisir Eldos, Aws Kanan, Abdullah Aljumah, 2013. Adapting The Ant Colony Optimization Algorithm To The Printed Circuit Board Drilling Problem. World of Computer Science and Information Technology Journal. USA.

23. Aws Kanan, Taisir Eldos, Mohammed Alkahtani, 2013. Mobile Ad Hoc Networks Routing Using Ant Colony. World of Computer Science and Information Technology Journal. USA.

24. Taisir Eldos, Walid Nazih, Hamed Eslemery, 2013. Error-Correction-Code Allocation Using The Chemical Reaction Optimization Algorithm. International Journal of Electrical & Computer Sciences. USA.

25. Taisir Eldos, Rose Al Qasim, 2013. On the Performance of the Gravitational Search Algorithms. International Journal of Advanced Computer Science Applications. West Yorkshire, United Kingdom.

26. Taisir Eldos, Was Kanan, Abdulla Aljumah, 2013. Solving The Printed Circuit Board Drilling Problem By Ant Colony Optimization Algorithm. International Conference on Soft Computing and Applications. San Francisco - CA, USA.

27. Taisir Eldos, 2014. Polymer Optical Fiber for In-House Networks Using Lower Girth Transmission System. Computer Engineering and Intelligent Systems, International Knowledge Sharing Platform. USA.

28. Taisir Eldos, Aws Kanan, Waleed Nazih, Ahmad Khatatbih, 2015. Adapting The Chemical Reaction Optimization Algorithm To The Printed Circuit Board Drilling Problem." International Conference on Computer, Computational and Mathematical Sciences. Zürich - Switzerland.

29. Taisir Eldos, Aws Kanan, Waleed Nazih, Ahmad Khatatbih, 2015. Adapting the Chemical Reaction Optimization Algorithm to the Printed Circuit Board Drilling Problem. World Academy of Science, Engineering and Technology International Journal of Computer, Control, Quantum and Information Engineering. Zürich - Switzerland.

30. Taisir Eldos, 2015. Chemical Reaction Optimization: A Problem Specific Implementation For Printed Circuit Board Drilling. Journal of Computer Science. USA. (Pending)

31. Taisir Eldos, Waleed Nazih, Aws Kanan, 2015. Maximally Distant Codes Allocation Using Chemical Reaction Optimization and Ant Colony Optimization Algorithms. Journal of Computer Science. USA.

32. Taisir Eldos and Abdullah Khreishah, 2016, Maximally Distant Codes Allocation Using Chemical Reaction Optimization With Enhanced Exploration. International Journal of Advanced Computer Science and Applications. USA & UK (2016).