

Mohammad Abdel-majeed

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Work Experience

- Aug 2024 - Present **Consultant, Trainer and Author**, *Investment World for Development and Technology Company*, Amman.
– Delivered **Python Training** for Ministry of Education ICT Supervisors and Contributed as a **co-author to the national Digital Skills curriculum (Grades 9–12)** in Jordan, focusing on content development in Artificial Intelligence and Computer Science..
- Dec 2021 - Oct 2023 **Department Chair**, *Computer Engineering Department*, The University of Jordan.
- June 2021 - Present **Associate Professor**, *Computer Engineering Department*, The University of Jordan.
- June-2020-December 2021 **Vice Chair**, *University Requirements Coordination Office*, The University of Jordan.
- 2016 - 2021 **Assistant Professor**, *Computer Engineering Department*, The University of Jordan.

Education

- 2002–2007 **BSc Computer Engineering**, *University of Jordan*, Jordan.
Cumulative GPA: 3.85.
- 2008–2010 **Master in Computer Engineering**, *University of Southern California*, USA.
Cumulative GPA: 4.0.
- 2010–2016 **PhD in Computer Engineering**, *University of Southern California*, USA.
Cumulative GPA: 3.93.
Thesis title: Demand Based Techniques to Improve the Energy Efficiency of the Execution Units and the Register File in General Purpose Graphics Processing Units.
Advisor: Murali Annavaram.

Industry Experience

- 05-08/2013 **Summer Intern**, *NVIDIA*, Santa Clara.

Worked on functional full-chip testing for the interactions between the CPU, GPU engines, and different memory hierarchies in the next generation GPUs.

02-08/2015 **Research Intern, Intel Labs**, Hillsboro.

Developed a cross layer infrastructure that is used to explore new techniques for improving the memory efficiency of the java applications. During this work I worked under the supervision of Chris Wilkerson.

Teaching and Mentoring

University of Jordan

- CPE546 Data Science
- CPE726 Applied Machine Learning
- CPE451 Artificial Intelligence and Machine Learning
- CPE311 Computer Application Lab (using python)
- CPE101 Computer Skills for Engineers (using C++)
- CPE461 Digital Electronics
- CPE462 Digital Electronics Lab
- CPE231 Digital Logic
- CPE234 Digital Logic Lab
- IE201 Technical Writing

University of Southern California

- EE450 Computer networks, *Teaching Assistant*, Spring '12, Spring '11, Fall '12
- EE653 Advanced Computer Architecture, *Teaching Assistant*, Spring '14
- EE653 Advanced Computer Architecture, *Invited Lecturer*, Spring '14
- EE109 Introduction to the Embedded Systems, *Teaching Assistant*, Spring '15
- EE355 Software Design for Electrical Engineers, *Teaching Assistant*, Spring '16
- Directed- Mentored many undergraduate and graduate students during my PhD. This includes
Research exposing them to the main areas in the GPU power efficiency and reliability and how to evaluate the proposed techniques using architecture simulators.

Publications

- JJCIT '25 G. Abandah, M. Khaleel, I. Jafar, **M. Abdel-Majeed**, Y. Hamdan, A. Suyyagh, A. AbdelKarim, S. AlAwawdeh, *Jordanian Arabic to Modern Standard Arabic Translation Using a Large Model Tuned on a Purpose-Built Dataset and Synthetic Error Injection*, Jordanian Journal of Computers and Information Technology (JJCIT) 2025.
- ICIT '25 **M. Abdel-Majeed**, A. Maraqa, M. Abu Mahmoud, O. Milad, S. Alawawdeh, Duplejli: AI-Based Adaptive and Multi-Lingual Video Dubbing System, 12th International Conference on Information Technology (ICIT), 2025
- JKSUCI '22 Gheith A. Abandah, Ashraf Suyyagh, **Mohammad R. Abdel-Majeed**, *Transfer learning and multi-phase training for accurate diacritization of Arabic poetry*. Journal of King Saud University - Computer and Information Sciences, 2022

- ISRITI '21 F.Jubair, N. Salim, O.Alkaradsheh, Y.Hassonah, R.Saifan, **M.Abdel-Majeed**, *Sentiment Analysis for Twitter Chatter During the Early Outbreak Period of COVID-19*, 4th International Seminar on Research of Information Technology and Intelligent Systems (ISRITI), 2021
- JKSUCI '20 Gheith A. Abandah, Mohammed Z. Khedher , **Mohammad R. Abdel-Majeed** , Hamdi M. Mansour , Salma F. Hulliel , Lara M. Bisharat, *Classifying and diacritizing Arabic poems using deep recurrent neural networks*. Journal of King Saud University - Computer and Information Sciences, Dec 2020
- PLDI '20 H. Kim, J. Zeng, Q. Liu, **M. Abdel-Majeed**, J. Lee, and C. Jung, *Compiler-Directed Soft Error Resilience for Lightweight GPU Register File Protection*, ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), London, United Kingdom, June 2020.
- Turkish **M.Abdel-Majeed**, T.Almousa, M.Alsalman and A.Yosf, *Sketic: Machine Learning Based Digital Circuit Recognition Platform*, TURKISH JOURNAL OF ELECTRICAL ENGINEERING and COMPUTER SCIENCES(2020), Vol. 28 Issue 4, p2030-2045.
- Integration'19 K.Matam, **M.Abdel-Majeed**, M.Annavaram, *Efficient Automatic Parallelization of a Single GPU Program for a Multiple GPU System*, Integration, In Press
- Integration'18 **M.Abdel-Majeed**, W.Dweik, *Low overhead online periodic testing for GPGPUs*, Integration, Volume 62, 2018, Pages 362-370, <https://doi.org/10.1016/j.vlsi.2018.04.015>.
- CAE'18 R.Saifan , W.Dweik, **M.Abdel-Majeed**, *A machine learning based deaf assistance digital system*, Computer Applications in Engineering Education, Volume 26, Pages 1008-1019, doi = 10.1002/cae.21952.
- HPCA '17 **M. Abdel-Majeed**, A.Shafaei, H.Jeon, M.Pedram, M.Annavaram, *Pilot register file: Energy Efficient Register File for GPUs*. In Proceedings of the 23rd International Symposium on High Performance Computer Architecture (HPCA), 2017
- ICS '16 **M.Abdel-Majeed**, D.Wong, J.Kuang, M.Annavaram. *Origami: Folding Warps for Energy Efficient GPUs*. In Proceedings of the ACM International Conference on Supercomputing (ICS), 2016
- DSN '15 **M. Abdel-Majeed**, W. Dweik, H.Jeon and M.Annavaram. *Warped-RE: Low-Cost Error Detection and Correction in GPUs*. In proceedings of the 45th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN), 2015.
- DSN '14 W. Dweik, **M. Abdel-Majeed** and M.Annavaram. *Warped-Shield: Tolerating Hard Faults in GPGPUs* In proceedings of the 44th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN), 2014.
- MICRO '13 **M. Abdel-Majeed**, D. Wong and M.Annavaram. *Warped gates: gating aware scheduling and power gating for GPGPUs*. In Proceedings of the 46th Annual IEEE/ACM International Symposium on Microarchitecture, MICRO-46, 2013.
- HPCA '13 **M. Abdel-Majeed**, and M.Annavaram. *Warped register file: A power efficient register file for GPGPUs* . In Proceedings of the 2013 IEEE 19th International Symposium on High Performance Computer Architecture (HPCA), 2013.

ISQED '12 **M. Abdel-Majeed**, Mike Chen, and M. Annavaram. *A case for 3D stacked analog circuits in high-speed sensing systems*. In Proceedings of the 2012 13th International Symposium on Quality Electronic Design (ISQED), 2012.

Professional Activities

Volunteering

August 2024 - **Chair** of the IEEE Joint CS and CIS Jordan Chapter
Present

January 2024 **Secretary** of General Activities at IEEE Jordan Section
- Present

2017-Present **Counselor** of the IEEE student branch at the University of Jordan.

Invited Reviewer

TVLSI '16 IEEE Transaction on Very Large Scale Integration Systems

TPDS '16 Transactions on Parallel and Distributed Systems

TCAS '16 IEEE Transactions on Circuits and Systems

'17 Integration, the VLSI Journal

'18 IEEE Transactions on Reliability

TPDS '18 IEEE Transactions on Parallel and Distributed Systems

TPDS '19 IEEE Transactions on Parallel and Distributed Systems

NTICT '19 4th International Conference on New Trends in Information and Communications Technology Applications

JPDC '20 Journal of Parallel and Distributed Computing

EAAI '20 Journal of Engineering Applications of Artificial Intelligence

EAAI '22 Journal of Engineering Applications of Artificial Intelligence

Program Committee Member

NTIT '17 New Trends in Information Technology

ISIICT '18 The Fifth International Symposium on Innovation in Information and Communication Technology

IPDPS '19 33rd IEEE International Parallel and Distributed Processing Symposium

JEEIT '19 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT)

ICCD'22 The 40th IEEE International Conference on Computer Design (ICCD)

ICCD'24 The 42nd IEEE International Conference on Computer Design (ICCD)

ICTCS'25 The 3rd International Conference on new Trends in Computing Sciences (ICTCS'25)

Funded Projects

- PI of the project titled **Use of Artificial Intelligence and Machine Learning to Detect Dental Problems**. The project is funded by Scientific Research and Innovation Support Fund, Ministry of Higher Education.

- Co-PI of the project titled **Developing Applications to Correct Jordanian Spoken Arabic to Proper Language Using Machine Learning Techniques**. The project is funded by Scientific Research and Innovation Support Fund, Ministry of Higher Education.

Honors and Awards

- Received the recognition as the **IEEE Outstanding Branch Counselor and Branch Chapter Advisor Award 2022**
- Part of the team who received the fund of 850,000.00 Euros from Erasmus to establish AI and Robotics Programs in Jordan
- Honorable Mention Poster Award, 4th Annual Ming Hsieh Research Festival.
- Received 2011 USC PhD Student Summer Research Institute Fellowship.
- Received four years Fellowship from University of Jordan to complete my higher studies (2008-2012).