

Ayman Mahmoud Aref Abdalla

**PHONE:****E-MAIL:** ayman@zuj.edu.jo, amabdalla@yahoo.com**MAILING ADDRESS:** P.O. Box 224, Amman 11623, Jordan.**CITIZENSHIP:** Jordanian.**BIRTH PLACE & DATE:** Amman, Jordan, on 26 November 1970.**FAMILY STATUS:** Married, has one child.**EDUCATION:**

Ph.D. (Computer Science), May 2001, University of Central Florida, Orlando, FL, USA.
Thesis Title: Computing a diameter-constrained minimum spanning tree.

M.S. (Computer Science), May 1996, Montclair State University, Montclair, NJ, USA.

B.S. (Computer Science), August 1992, Montclair State University, Montclair, NJ, USA.

LANGUAGE SKILLS: Arabic and English: Reading, writing, and speaking.**MAIN RESEARCH FIELD:** Image and Video Encoding.**RESEARCH OBJECTIVE:** Utilize available research resources to conduct novel research and to publish internationally-indexed research papers with progressive quality.**WORK EXPERIENCE:****7/2001 – present: Assistant Professor / Associate Professor**

DEPARTMENT OF COMPUTER SCIENCE / DEPARTMENT OF MULTIMEDIA SYSTEMS

FACULTY OF SCIENCE AND INFORMATION TECHNOLOGY (FS&IT)

*Al-Zaytoonah University of Jordan (ZUJ), Amman, Jordan***➤ Promoted to the rank of Associate Professor in March 2016.**

- Supervised some master's students' theses and defense.
- Taught different courses that include Graduates & Undergraduate Operating Systems and Algorithms, Undergraduate Data Structures, Computer Networks, Computer Graphics, Color Spectrum, Design of Programming Languages, Object Oriented Programming, Information Technology & Society, Compiler Design, Systems Software Design, and Computation Theory.
- Co-supervised two Ph.D. students, as a local supervisor, one for De Montfort University (Leicester, UK) and one for the University of Sunderland (Sunderland, UK), to help direct their research and to provide them with advise to improve their dissertations.
- Co-supervised one master's student and examined another student's master's thesis defense.
- Supervised many graduation projects and practical training of undergraduate students.
- As a member of the Board of the FS&IT, from 10/2009 to 10/2013, participated in making decisions that helped the progress of the faculty.
- Participated in the creation of the Department of Multimedia Systems and served as its founding Chair from 10/2010 to 10/2013.
- As the founding Chair of the Multimedia Systems Department, held the responsibility for meeting academic accreditation standards, including creating course plans, selecting references, and determining hardware and software requirements of new labs, in conjunction with delegating responsibilities to members of the department and supervising their work.

- Coordinated with the University of Sunderland (UK) to administer the joint BSc Computer Studies (Honors) program from 2004 to 2007. Monitored course plans, exams, and assignments to ensure meeting the requirements of both ZUJ and the University of Sunderland.
- Served as a member of the Organizing Committee and the Technical Committee of the biannual International Conference on Information Technology, at ZUJ, Amman, Jordan from 2003 to 2015. For this conference, helped supervise and organize some activities, evaluated papers for meeting conference editorial conditions, distributed papers to appropriate referees, refereed several papers, and chaired some sessions.
- Served as a member of the FS&IT Quality Assurance Committee to review and produce forms and documents that help meet national and international quality assurance standards.
- Served as the Head of the Computer-Science Course-Plan & Reference Committee to help update the computer science course plan and provide suggestions to improve different courses.
- Taught review sessions to prepare students for national and international standardized exams.
- Helped organize scientific events, presentations by off-campus organizations, and extracurricular activities for the students and instructors of the FS&IT.
- Participated in student academic advising and other tasks assigned by the department, such as revising the syllabus of some courses and coordinating common exams.

1/1997 – 5/2001: Graduate Teaching Assistant

SCHOOL OF COMPUTER SCIENCE

University of Central Florida, Orlando, FL, USA

- Taught a C-Language Programming course, which included giving lectures, exams, and projects.
- Taught recitation sessions and assisted students of different courses that included Discrete Mathematics, Systems Software, Computer Organization, and Foundations of Computer Science.
- Graded exams and homework assignments for the above courses.

6/1999 – 12/1999: Development Co-Op

ImageSoft Technologies (Fiserv), Maitland, FL, USA

- Designed and implemented object-oriented computer programs in C++.
- Built and tested new programs using GNU Make in the company's testing environment.
- Performed reliability testing of existing software.
- Helped update the user manual for a new release of a company software package.

9/1992 – 5/1996: Graduate Assistant / Master Tutor

Montclair State University, Montclair, NJ, USA

- Tutored students on: Pascal, C, BASIC, Computer Architecture, Data Structures, Discrete Mathematics, Calculus I-III, College Algebra, Math for Business, and Differential Equations.

FUNDED RESEARCH PROJECTS:

- A. Abdalla, M. Salah and S. Khalaf, "Load-Balancing of Virtual Tours in Distributed Systems." **5/2012–7/2014** (JOD 60,954 – funded by Al-Zaytoonah University of Jordan, Amman, Jordan).
- A. Abdalla and A. Abusukhon, "Parallel Information Retrieval." **7/2007–7/2008** (JOD 11,000 – funded by Al-Zaytoonah University of Jordan, Amman, Jordan).

PUBLICATIONS:

Journal Articles:

- A. Abdalla, M. Abdallah, M. Salah, “A brief program robustness survey,” *International Journal of Software Engineering & Applications*, (accepted 2016 – to appear 2017).
- A. Mazhar and A. Abdalla, “Joint reference frame inter-mode selection for fast H.264 video coding,” *Signal, Image and Video Processing*, vol. 10(4): pp. 617-623, 2016.
<http://link.springer.com/article/10.1007/s11760-015-0785-1>
- Manar A. Mizher, S.H. Al-Sharaeh, M.C. Ang, A. Abdalla and Manal A. Mizher, “Centroid dynamic sink location for clustered wireless mobile sensor networks,” *Journal of Theoretical and Applied Information Technology*, vol. 73(3): pp. 481-491, 2015.
<http://www.jatit.org/volumes/Vol73No3/18Vol73No3.pdf>
- A. Abdalla, A. Mazhar, M. Salah and S. Khalaf, “Comparative study of compression techniques for synthetic videos,” *International Journal of Multimedia & Its Applications*, vol. 6(2): pp. 1-10, 2014.
<http://airccse.org/journal/jma/6214ijma01.pdf>
- A. Tamimi, A. Abdalla and O. Al-Allaf, “Hiding an image inside another image using variable-rate steganography,” *International Journal of Advanced Computer Science and Applications*, vol. 4(10): pp. 18-21, 2013.
http://thesai.org/Downloads/Volume4No10/Paper_4-Hiding_an_Image_inside_another_Image.pdf
- A. Abdalla, “Variable-rate steganography using RGB stego-images,” *European Scientific Journal*, vol. 9(15): pp. 62-67, 2013.
<http://eujsjournal.org/index.php/esj/article/view/1090/1124>
- A. Abdalla and A. Tamimi, “Algorithm for image mixing and encryption,” *International Journal of Multimedia & Its Applications*, vol. 5(2): pp. 15-21, 2013.
<http://airccse.org/journal/jma/5213ijma02.pdf>
- A. Abusukhon, M. Oakes and A. Abdalla, “Performance analysis of distributed IR systems: document-based, term-based and hybrid partitioning,” *International Journal of Information Studies*, vol. 1(1): pp. 40-49, 2009.
<http://www.istudies.net/ojs/index.php/journal/article/view/27/27>
- A. Yahya and A. Abdalla, “A shuffle image-encryption algorithm,” *Journal of Computer Science*, vol. 4(12): pp. 999-1002, 2008.
<http://dx.doi.org/10.3844/jcssp.2008.999.1002>
- M. Nabulsi and A. Abdalla, “The relationship between exclusive-or and the unique existential quantifier,” *Journal of Computer Science*, vol. 4(9): pp. 741-743, 2008.
<http://dx.doi.org/10.3844/jcssp.2008.741.743>
- M. Nabulsi and A. Abdalla, “A method of deductive logical inference proofs,” *Journal of Computer Science*, vol. 4(4): pp. 345-348, 2008.
<http://dx.doi.org/10.3844/jcssp.2008.345.348>
- A. Yahya and A. Abdalla, “Implementation of matrix folding in multimedia transmission,” *Information Technology Journal*, (Formerly: *Pakistan J. Information & Technology*), vol. 2(2): pp. 154-158, 2003.
<http://www.scialert.net/qredirect.php?doi=itj.2003.154.158&linkid=pdf>
- A. Yahya, A. Abdalla and K. Al-Qawasmi, “Compressing video using matrix folding,” *Information Technology Journal*, (Formerly: *Pakistan J. Information & Technology*), vol. 2(1): pp. 61-64, 2003.
<http://www.scialert.net/qredirect.php?doi=itj.2003.61.64&linkid=pdf>

- A. Abdalla and N. Deo, “Random-tree diameter and the diameter-constrained MST,” *International Journal of Computer Mathematics*, vol. 79(6): pp. 651-663, 2002.
<http://dx.doi.org/10.1080/00207160211289>
- A. Abdalla, N. Deo and P. Gupta, “Random-tree diameter and the diameter-constrained MST,” *Congressus Numerantium*, vol. 144, pp. 161-182, 2000.
<http://130.203.133.150/showciting;jsessionid=0EAF22A157D0E4B55547660E88789851?cid=1396947>
- A. Abdalla, N. Deo and R. Fanceschini, “Parallel heuristics for the diameter-constrained MST problem,” *Congressus Numerantium*, vol. 136: pp.97-118, 1999.
<http://130.203.133.150/showciting;jsessionid=1BEC324966E4165E0DA536B384980518?cid=2096045>
- A. Abdalla, N. Deo, N. Kumar and T. Terry, “Parallel computation of diameter-constrained MST and related problems,” *Congressus Numerantium*, vol. 126: pp. 131-155, 1997.
<http://130.203.133.150/showciting;jsessionid=09877E85B934182CEA699655F644BC78?cid=13322550>

Conference Proceedings / Proceeding in Edited Books:

- A. Tamimi and A. Abdalla, “An image encryption algorithm with XOR and S-box,” In *The 19th International Conference on Image Processing, Computer Vision, and Pattern Recognition (ICPV '15)*, Las Vegas, NV, USA. 27-30 July 2015.
<http://www.world-academy-of-science.org/worldcomp15/ws/conferences/ipv15>
- A. Tamimi and A. Abdalla, “An audio shuffle-encryption algorithm,” In *The International Conference on Internet and Multimedia Technologies (ICIMT '14)*, (Printed in *Proceedings of the World Congress on Engineering and Computer Science 2014*), Vol I: pp. 409-412, San Francisco, CA, USA. 22-24 October 2014.
http://www.iaeng.org/publication/WCECS2014/WCECS2014_pp409-412.pdf
- A. Tamimi and A. Abdalla, “A double-shuffle image-encryption algorithm,” In *The 2012 International Conference on Image Processing, Computer Vision, and Pattern Recognition (ICPV '12)*, Las Vegas, NV, USA. 16-19 July 2012. Printed in *Image Processing, Computer Vision, and Pattern Recognition* [eds. H.R. Arabnia and L. Deligiannidis], pp. 496-499, CSREA Press, 2012.
<http://www.world-academy-of-science.org/worldcomp12/ws/conferences/ipv12>
- A. Yahya and A. Abdalla, “An AES-based encryption algorithm with shuffling,” In *The 2009 International Conference on Security and Management (SAM '09)*, Las Vegas, NV, USA. 13-16 July 2009. Printed in *Security and Management* [eds. H.R. Arabnia and K. Daimi], pp. 113-116, CSREA Press, 2009.
<http://www.bibsonomy.org/bibtex/2188e14cd290b3483a24c4075d1b41c0e/dblp>
- A. Abusukhon, M.P. Oakes, M. Talib and A. Abdalla. “Comparison between document-based, term-based and hybrid partitioning,” In *First International Conference on the Applications of Digital Information and Web Technologies (ICADIWT '08)*, Czech Republic, 4-6 August 2008. Printed in *Applications of Digital Information and Web Technologies* [eds. V. Snasel, J. Pokorny, P. Pichappan, E. El-Qawasmeh and E. Ariwa], pp. 90-95, IEEE, 2008.
<http://dx.doi.org/10.1109/ICADIWT.2008.4664324>
- N. Deo and A. Abdalla, “Computing a diameter-constrained minimum spanning tree in parallel,” In *The 4th Italian Conference, CIAC 2000*, Rome, Italy, 1-3 March 2000. Printed in *Algorithms and Complexity, Lecture Notes in Computer Science* [eds. Bongiovanni, Gambosi, and Petreschi], no. 1767, pp. 17-31, Springer-Verlag, New York, 2000.
<http://www.springer.com/us/book/9783540671596>