

# Zainab AlMeraj

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## EDUCATION

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- **University of Waterloo** Waterloo, ON, Canada  
*PhD in Computer Science* Aug. 2008 – June. 2013
- **Kuwait University** Khaldiya, Kuwait  
*Masters of Engineering in Computer Engineering - part time* Aug. 2004 – April. 2006
- **University of Victoria** Victoria, B.C., Canada  
*Masters of Science in Computer Science* Aug. 2007 – July. 2008
- **California State University, Long Beach** Long Beach, California, U.S.A.  
*Bachelor of Science in Computer Engineering* Jan. 2000 – Dec. 2003

## EMPLOYMENT

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- **Kuwait University** Adailiya, Kuwait  
*Assistant Professor, Information Science Department* Oct 2013 - Present
  - **Professional Services:** ISC General Student Advisor and advising committee coordinator 2016-Present, ISC ClickIT club Supervisor 2015-Present.
  - **Committees memberships:** Advising committee, ABET accreditation committee, MSIT program committee, MSCIS program committee, Accreditation committee, Social committee, Ethics Review Committee.
  - **Teaching:** Undergraduate courses: Fundamentals of Personal Computers, Introduction to Information Systems, IT, Ethics in IT, Computers and Society, IS Theory and Practice, Calculus, Algebra, Introduction to Management Information Systems, Interactive 3D Graphics Modeling, 5 Internship supervision and 3 Capstone project supervision, Graduate courses: Introduction to Information Technology, Ethics and laws in Information technology, Information Systems Analysis, Computer Graphics (Special Topics), System analysis, modelling and design
- **Kuwait University** Adailiya, Kuwait  
*Teaching Assistant on a scholarship M.Sc. and Ph.D.* Sept. 2006 - Sept. 2013
- **Kuwait University** Adailiya, Kuwait  
*Scientific Research Assistant* Sept. 2005 - August. 2006
  - **Teaching:** calculus, pre-calculus, Introduction to Information Systems to undergraduate students.
  - **Administrative duties:** Developed quizzes, exams, and homework's and coordinated grading and labs with other teaching assistants
- **Ministry of Defense (MOD)** Sabhan, Kuwait  
*Computer Engineer* Jan. 2004 - Aug. 2005
  - **Computer Networks:** Created models for portfolio hedging, portfolio optimization and price forecasting. Also creating a strategy backtesting engine used for simulating and backtesting strategies.
  - **QuantDesk:** Python backend for a web application used by hedge fund managers for portfolio management.

## RESEARCH AND TEACHING EXPERIENCE

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- Assistant Professor, Department of Information Science, College of Computing Sciences and Engineering, Kuwait University, 2013 - Present.
- Research Assistant at the Computer Graphics Lab and Adobe Inc. University of Waterloo 2010 - 2013
- Research Assistant at the Island Graphics Lab Computer Science Consultant Office University of Victoria, 2007 - 2008
- Teaching Assistant, Information Science Department, College for Women, 2005 - 2006

## NON-PROFIT COMMUNITY LEADERSHIP POSITIONS AND SERVICES

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- **The National Association of Familial Security (Rawasi NGO)** Kuwait  
*Treasurer* *August 2013 - Present*
  - **Mission:** RAWASI is aimed at maintaining familial security in the Kuwaiti society by defending the social and legislative rights of the family and individuals and seeking to introduce legislations and laws that realize this goal. The Association diligently strives to activate and implement the civil legislations and laws of the country that ensure the realization of familial security.
  - **Head of UN Reports Committee, 2014-Present:** Research, analyzing, writing, and submitting reports directly to the UN of the status of human/family rights and situations in Kuwait. See OHCHR references below.
  - **UN Consultative Status:** Lead, applied and secured Special Consultative Status with the UN Economic and Social Council (ECOSOC) (applied twice since 2014)
  - **Official Representations:** Represented the NGO in the 22nd session of the CRPD (Convention on the Rights of Persons with Disabilities) on the 9-10th September 2019 at the UN Headquarters, Geneva.
  - **Partnerships:** Worked with multiple other NGOs on workshops targeting women and children
  - **Workshops:** Planning, recruiting, announcing event, and overseeing the full completion of talks and workshops and coverage on social media channels.
- **Google Developer Group Kuwait City and Women Techmakers (GDGWTM Kuwait City)** Kuwait  
*Founder, Lead Co-organizer and Women Techmakers Ambassador* *July 2017 - Present*
  - **Goal:** Providing resources, visibility and a community for tech-minded individuals. We help advance skills, networking, job access towards building a strong tech ecosystem in Kuwait.
  - **Conferences:** Planned, organized and delivered International Womens Day conference IWD and DevFest 2018 and 2019 targeting trending technologies and startup communities.
  - **Competitions:** Designed and implemented two 12 hour Hackathon for social good as part of IWD promoting open source and developing solutions for social problems in the country.
  - **Training workshops:** Planned, secured speakers, executed over 40 hands on training workshops and talks in various technologies. Such as: TensorFlow, Google Assistant, Flutter/Dart, iOS, Android and Web Development, Google mobile site certification, Family AI Challenge
  - **Women focus:** As Women Techmakers Ambassador I focus on visibility and empowering women through events like, I am Remarkable sessions, Women in Tech discussion sessions, and panels like Women in Tech Entrepreneurship in Kuwait
  - **Sponsorships:** Established strategic partnerships with multiple large companies (NIU -2018, Zain 2019)
  - **Growth:** As of July 2019 we have 1153 members, offered 40 workshops, served over 1200 members of the community.
- **Arab Women in Computing Kuwait Chapter** Kuwait  
*Founder and President* *Feb. 2017 - Present*
  - **Mission:** The mission of Arab Women in Computing (ArabWIC) is to support, inspire, retain, encourage collaboration among, increase visibility of and help elevate the status of Arab women in computing and technology from the various computing/technology sectors (academia, industry, private and government, as well as entrepreneurs); allow them to achieve their career goals, and create linkage between them and women-in-CS organizations internationally.
  - **Impact:** Preparing sponsorships and partnership proposals for women empowerment meetings, training and events including International Womens Day in collaboration with GDG&WTM Kuwait
- **ClickIT** Kuwait University  
*Supervisor* *Fall 2014 - Spring 2019*
  - **Training workshops:** Organized on average of 4 events per term catering to student interest and needs from technical to public speaking and soft skills development (over 35 in total)
  - **Job Fair:** Developed, planned, implemented and documented a job fair for the students of the CCSE college with a total of 45 participating companies, 8 speakers and activities and catering.
- **W3C** GCC Regional Hub Kuwait  
*Product manager* *March 2019 - October 2019*
  - **Localization:** Responsible for studying localization and the running of EdX courses in Kuwait for an Arabic speaking audience

## PROFESSIONAL SERVICES: CONFERENCES, PRESENTATIONS AND WORKSHOPS

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- Presentation, "Artificial Intelligence (AI): Changing our business landscape", Canadian Business Council, Kuwait: Nov 2019
- Community Leader, DORNA Women's online platform: 2019-Present
- Conference Chair, Google Developer Group & WTM DevFest : 2018, 2019
- Conference Chair, Google Developer Group & WTM International Womens Day: 2018, 2019
- Competition initiator and head organizer, 12 Hour Hackathon for Social Good under GDG&WTM Kuwait City, the only platform in Kuwait for connecting developers with NGOs: 2018, 2019
- Workshop, Learn English through STEAM concepts at the English Skills Institute Developed a curriculum and put together materials for an 8 hours camp to strengthen children English conversation and vocabulary skills: September 2018, 2019
- Workshop, Website Development Workshop - with GDG&WTM Kuwait.: Nov-Dec 2017
- Workshop, The effect of Technology on the Family, RAWASI: May 2017
- Workshop, Android Basic User Interface, WTM Kuwait: January 2018
- Workshop, Active teaching with technology for faculty, Facilitator and trainer for Office of the Vice President of Planning, Kuwait University: February 2018

## HONORS AND AWARDS

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- Nominated as one of 15 women founding members of Munjiza platform nby KIPCO CSR, Kuwait.: Novemeber 2019
- Financial award by The Ministry of Social Affairs and Public Work to represent RAWASI NGO at the 22nd session of the CRPD (Convention on the Rights of Persons with Disabilities) government reports at the UN Headquarters, Geneva.: 9-10th September 2019
- Awarded Best Startup Initiative in Kuwait by Startup Magazine (GDG&WTM Kuwait City): June 2019
- Financial award by Google MENA to attend Google Cloud Next Conference: March 2019
- Financial award as an International Observer by ACM International to attend Grad Cohort program workshop: February 2019
- Financial award: Recipient of researcher support by Kuwait Foundation of the Advancement of Science (KFAS) to present UCD paper in ACHI conference (Athens, Greece): 2019
- Financial award by ACM CHIXBorders to attend MENA meeting (Alexandria, Egypt): 2018
- Financial award: Five trips funded by NSERC grants to present research publication: 2007-2012
- Financial award by Google to attend CRA-W 2007 (Seattle, Washington): 2007-2008
- Kuwait University Graduate Scholarship MSc and PhD: 2006-2013
- Kuwait Ministry of Education Outstanding Achievement Award: 2003
- Deans List Honours, Cal State Long Beach USA: 2000-2003
- Presidents List Honours, Cal State Long Beach USA: 2000-2003
- Merit Undergraduate Scholarship Ministry of Higher Education: 1999-2003

## ACADEMIC SERVICE

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- Associate Chair (AC) on the Program Committee (PC) for CHI 2020 Late Breaking Works (LBWs), 25-30 April, Honolulu, Hawaii (the highest ranking HCI, ACM-affiliated conference): 2020
- Co-Founder and member, Special Interest Group - Human Computer Interaction (SIGCHI), Kuwait City Chapter, Associated Computing Machinery (ACM) : 2019 - Present.
- Reviewer for: Computer World 2008, Bridges 2011, Pacific Graphics 2011, Expressive (NPAR and CAe) 2013, 2014, 2015, 2016, 2017, Graphics Interface 2013, 2015, International Conference on Computing Sciences and Engineering Conference ICCSE 2015, Computers and Graphics 2015, Pervasive Health 2017, ICNAAM 2016, 2017, EuroGraphics 2017, ArabWIC conference 2019:
- Committee member in: Graduate Program Committee M.S. Computer Information Systems, Information Science, Graduate Program Committee 2017-2018 M.S. Information Technology, Information Science 2016-2017, Ethics Review Committee 2018-Present, Social and Public Seminar Committee: 2015-Present
- Secretary, Department Council, Information Science Department, College of Computing Sciences and Engineering: 2013,2014

- **Acting Chair, Information Science Department, College of Computing Sciences and Engineering: 2016 - 2018**
- **Conference PC committee and co-organizer IEEE GCC Publicity committee Kuwait and session chair: 2019**
- **ArabWIC Annual Conference (PC member), Lebanon: 2017, 2019**
- **Digital World 2019 - IARIA, ACHI Session chair: 2019**
- **Post conference Evaluation Chair, Poster Chair, International Conference on Computing Sciences and Engineering Conference ICCSE conference: 2015, 2018**
- **SIGCHI Across Borders initiative by(ACM) (Organizing member) Alexandria: 2018**
- **Program committee member, Expressive conference, USA: 2017**
- **Conference chair and head organizer, VicGraph, Conference, The first computer graphics conference to be held at University of Victoria: 2017**
- **Conference chair and head organizer, Information Science Conference, Job Fair and Exhibition: 2016**
- **Reviewer and Chair, Poster Committee, 2nd International Conference on Computing Sciences and Engineering: 2018**

#### RESEARCH GRANT PROJECTS

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- **Cubic Quadrature Formula with Fifth Degree of Accuracy: 2019-Present**
- **Exploring Challenges and Potentials of Adopting Health IT Solutions for Diabetes Care and Management. Dasman Diabetes Institute: 2019 - Present**
- **Automatic and Manual Accessibility Evaluation of Higher Education Institutes websites in the State of Kuwait with An Inquiry into Developer Awareness and Knowledge of Local and International Accessibility Standards: Awaiting approval**

#### MASTERS THESIS SUPERVISIONS

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- **E-government and a cyber security readiness model: Engr. Ali AlEnizi, MSIT, 2018-Present**
- **Accessibility of e-commerce websites in Kuwait: Shok Shama, MSIT, 2018-Present**
- **Mobile accessibility of e-government in Kuwait: Hawraa AbdulReda, MSIT, 2019-Present**
- **Systematic Analysis of the Barriers Faced by Arab Women in STEM: Zahraa Abullol, MSIT, 2019-Present**

#### PROFESSIONAL AFFILIATIONS

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- **User Experience Professional Association - UXPA: 2018-Present**
- **ACM SIGCHI/SIGGRAPH: 2003-Present**
- **Grace Hopper Anita Borg Institute: 2012-Present**
- **Computing Research Association for Graduate Women CRA-W: 2009-2013,2019-Present**
- **Consultative Status with the UN Economic and Social Counsel through RAWASI: 2018-Present**
- **CHI Kuwait City Chapter: 2018-Present**
- **IEEE: 2003-2014**

#### JOURNAL PUBLICATIONS (MOST RECENT FIRST)

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- [1] E. A. Doush and Z. AlMeraj. Evaluating the accessibility of kuwait e- government websites. *Jordanian Journal of Computers and Information Technology*, December 2019.
- [2] A. A. Doush, M. Al-Betar, M. Awadallah, E. Santos, A. Hammouri, M. Mafarjeh, and Z. AlMeraj. Flow shop scheduling with blocking using modified harmony search algorithm with neighbouring heuristics methods. *Applied Soft Computing*, April 2019.
- [3] D. AlHuwait, Z. AlMeraj, and F. Boujawrah. Evaluating hospital websites in kuwait to improve consumer engagement and access to health information: A cross sectional analytical study. *bmc medical informatics and decision making. BMC Medical Informatics and Decision Making Journal*, 2018.
- [4] A. AlEnezi, Z. AlMeraj, and P. Manuel. Challenges of iot based new generation smart-government. *Journal of Informatics and Mathematical Sciences*, 10(3), 2018.

- [5] M. Saddique, K. Qureshi, J. H. Kazmi, and Z. Meraj. An enhancement in segmentation of magnetic resonance images of brain tumors using symmetry and active contour. *International Journal of Computers and Their Applications (IJCA)*, 24, 2017.
- [6] Z. Meraj, B. Wyvill, T. Isenberg, A. Gooch, , and R. Guy. Automatically mimicking unique hand-drawn pencil lines. *Computers and Graphics Journal*, 2009.

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#### JOURNALS IN REVIEW

- Zainab AlMeraj, Ali AlEnizi and Paul Manuel. An organizational cyber security readiness model: Towards secure IoT foundations. (Submitted for review July 2019)
- Zainab AlMeraj, Dari AlHuwait and Fatima Boujarwah. An investigation into the accessibility of higher education websites in the State of Kuwait. Submitted for review September 2019

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#### JOURNALS IN PROGRESS

- Zainab AlMeraj, and Shok Shama. A cross section evaluation of e-commerce website accessibility in the State of Kuwait.
- Zainab AlMeraj, and Abdalla Rababah. Cubic Quadrature Formula with Fifth Degree of Accuracy.

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#### CONFERENCE PUBLICATIONS

- Shok Shama and Zainab AlMeraj, An investigation into consumer experiences using e-commerce websites in the State of Kuwait, CHI Workshop on HCI research and practice n the Arab world, ACM CHI19, Glasgow, UK, May 2019.
- Zainab AlMeraj and Asmaa AlSumait, A User Centered Design Roadmap for Researchers and Designers Working with Visually Impaired and Blind Children, IARIA - ACHI paper Athens, Greece 2019.
- Fatma Boujarwah, Zainab AlMeraj, Dari AlHuwait. What do users want? Preliminary analysis of user expectations of hospitals in the state of Kuwait. ACM CHI conference first ArabHCI workshop. Montreal April 2018.
- Ali Alenizi, Zainab AlMeraj, Paul Manuel. , Challenges of IoT based Smart-government Development (2018) 21st Saudi Computer Society National Computer Conference, NCC 2018
- Ali Alenizi, Zainab AlMeraj, Paul Manuel. Challenges of IoT Smart Based Government. IEEE GreenTech: Smart City, Austin Texas April, 2018.
- Abdalla Rababah, Zainab AlMeraj. The best uniform approximation algorithm with degree two. ICNNAM conference 2016, AIP Conference proceedings 060003, Greece 2016. <http://dx.doi.org/10.1063/1.4992217>
- Towards Effective Evaluation of Geometric Texture Synthesis. Proceedings of the Symposium on Non-Photorealistic Rendering - NPAR - Expressive 2013. Pages 5-14 (10). DOI <http://doi.acm.org/10.1145/2486042.2486043>
- Zainab AlMeraj, Craig S. Kaplan, Paul Asente. Patch-based geometric texture synthesis. Computational Aesthetics - CAe Expressive 2013, Pages 15-20 DOI <http://dx.doi.org/10.11145.2487276.2487278> Anaheim, California. ACM New York, USA
- (technical report) K. Bibik, C, Iu, H. Vosoughpour, G. Yap, Z. AlMeraj, A. Pytel, W. Cowan and S. Mann. Implicit surfaces seminar, Spring 2012. Technical report, Cheriton School of Computer Science, University of Waterloo. 2013.
- Zainab AlMeraj, Craig S. Kaplan, Paul Asente, Ed Lank. Towards ground truth in geometric textures. DOI <http://dx.doi.org/10.1145/2024676.2024679> (NPAR 2011, August 5-7, Vancouver, British Columbia, Canada).

- Zainab Meraj, Brian Wyvill, Tobias Isenberg, Amy Gooch, and Richard Guy. Mimicking Hand-Drawn Pencil Lines. With Ken Anjyo and Pascal Barla, editors. Poster and Animation Proceedings of the Sixth International Symposium on Non-Photorealistic Animation and Rendering (N PAR 2008, June 9-11, 2008, Annecy, France), page 9, 2008.
- Zainab Meraj, Brian Wyvill, Tobias Isenberg, Amy Gooch, and Richard Guy. Mimicking Hand-Drawn Pencil Lines. In Paul Brown, Douglas W. Cunningham, Victoria Interrante, and Jon McCormack, editors, Proceedings of the International Symposium on Computational Aesthetics in Graphics, Visualization, and Imaging (CAE 2008, June 18-20, 2008, Lisbon, Portugal), pages 7380, Aire-la-Ville, Switzerland, 2008. Eurographics Association.
- Zainab Meraj and Sabah Al-Fadaghi, CARPI: Capture, Archival and Retrieval of Personal Information. BTW 2007 (Business, Technology and Web) Workshop on Multimedia Semantics The Role of Metadata. Aachen, Germany, March 2007.

## POSTERS

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- Zainab AlMeraj, Fatma Boujarwah, Dari AlHuwait. Evaluating hospital websites In Kuwait 2018 ICCSE conference. March 2018, by Kuwait, Kuwait City.
- Zainab AlMeraj, Fatma Boujarwah, Dari AlHuwait. Evaluating hospital websites: a cross-sectional analytical study 2018 Kuwait University Scientific poster day 2018.
- Ali Alenizi, Z. AlMeraj and P. Manuel. Challenges of Smart government. Kuwait University Scientific Poster day 2018 (2nd Place award).
- Zainab AlMeraj and Saqiba Sulaiman, Reminders: A progression model enabling Alzheimer caregivers track regression Poster in Kuwait University Poster Day 2015 (awarded second place in the competition between posters at the College of Computing Sciences and Engineering).
- Zainab AlMeraj, Craig S. Kaplan, Paul Asente, Geometric texture aesthetics for digital Cartography Poster in Visual Science of Art Conference VSAC, Alghero, Italy 2012.
- Zainab AlMeraj, Craig S. Kaplan, Paul Asente, Patch-based geometric synthesis Poster in NPAR 2012. Annecy, France.
- Zainab AlMeraj, Craig S. Kaplan, Paul Asente, Similarity measures for geometric arrangements Poster in Graphics Interface 2012. York, Ontario, Canada.
- Zainab AlMeraj, Towards ground truth in geometric textures Poster in Grace Hopper 2011. Portland, Oregon, USA.
- Zainab AlMeraj, Craig S. Kaplan, Paul Asente, Ed Lank. Towards ground truth in geometric textures. Poster in the 37th Graphics Interface conference. (GI 2011, May 24-27, 2011, St. Johns, Newfoundland, Canada), 2011.

## NON-SCIENTIFIC REPORTS UN – OHCHR HUMAN RIGHTS

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- The Shadow report of the National Association of Familial Security Rawasii” to the UN Commission of the Rights of the Child (CRC) Nov 2018.
- The Shadow report of the National Association of Familial Security Rawasii” to the Arab Human Rights Committee 12th session (Mithaq committee part of the Arab Human Rights Committee Dec 2016
- The report of the National Association of Familial Security ”Rawasii” Parallel to the Periodic report of Kuwait submitted to the Commission on the Elimination of Discrimination against Women (CEDAW) 2016
- The report of the National Association of Familial Security ”Rawasii” Parallel to the report of Kuwait submitted to the Commission on the Elimination of Discrimination against Women (CEDAW) 2015.

- The report of the National Association of Familial Security "Rawasii" Parallel to the first periodic report of the State of Kuwait submitted to the United Nations Committee for the Human Rights for Persons with Disabilities (CPRD) 2015.
- The report of the National Association of Familial Security "Rawasii" Parallel to the third periodic report of the State of Kuwait submitted to the UN Commission for Human rights that monitors the Implementation of the Covenant on Civil and Political Rights (CCPR) 2015
- The report of the National Association of Familial Security "Rawasii" Parallel to the third Periodic Universal report of the State of Kuwait. Submitted to the United Nations Commission for Human Rights (UPR) 2014.