

# SHIROQ AL-MEGREN

Postdoctoral Research Fellow, Massachusetts Institute of Technology

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## PROFESSIONAL STATEMENT

A detail-oriented, organized, and goal-oriented Assistant Professor in Computer Science with academic and research experience. Practical experience in conducting multi-disciplinary research with excellent skills in problem solving and critical thinking. Highly motivated and hard working with the ability to communicate with experts from a diverse set of disciplines.

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## EDUCATION

February-2012 April-2016	Doctor of Philosophy (Ph.D.), Computer Science, University of Leeds Leeds, United Kingdom Subject of dissertation: A Tangible User Interface for Interactive Data Visualization. Supervisor: Prof. Roy Ruddle Examination committee: Dr. Abjijit Karnik and Prof. David Duke.
September-2010 August-2011	Master of Science (M.Sc.), Computer Science, Newcastle University Newcastle upon Tyne, United Kingdom Graduated with distinction. Subject of dissertation: Evaluation of Extended Duration Multi-touch Interaction. Supervisor: Prof. Patrick Olivier
September-2002 June-2007	Bachelor of Science (M.Sc.), Information Technology, King Saud University Riyadh, Saudi Arabia Graduated with an excellent final grade and second class honours. Subject of dissertation: AraDict – Arabic Add-In Speech Recognition Application for MS Word 2007. Supervisor: Dr. Afshan Jafri

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## WORK EXPERIENCE

February-2019 Current	Postdoctoral Research Fellow Mechanical Engineering Department, Massachusetts Institute of Technology Cambridge, United States
February-2017 Current	Assistant Professor Information Technology Department, King Saud University Riyadh, Saudi Arabia
December-2007 February-2017	Teaching Assistant Information Technology Department, King Saud University Riyadh, Saudi Arabia

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## CERTIFICATION

January-2018 Current	Certificate in Data Science University of Washington Professional and Continuing Education - online
January-2018 February-2018	Internet of Things: Roadmap to a Connected World Massachusetts Institute of Technology xPro - online

## AWARDS & PRIZES

- 2019 Ibn Khaldun Research Fellowship  
King Abdulaziz City for Science and Technology, Riyadh, Saudi Arabia
- 2018 Ra'ad Research Funding for New Faculty  
King Saudi University, Riyadh, Saudi Arabia
- 2011 The Philip Merlin Prize for Best Dissertation by an M.Sc. Student  
First place  
Newcastle University, Newcastle upon Tyne, United Kingdom
- 2011 Colin Graham M.Sc. Computing Science Group Project Prize  
First place  
Newcastle University, Newcastle upon Tyne, United Kingdom
- 2007 Advanced Electronics Company's Best Project  
Third place  
King Saud University, Riyadh, Saudi Arabia

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## SELECTED PUBLICATIONS

- Journal Articles
- A Systematic Review of Modifications and Validation Methods for the Extension of the Keystroke-level Model  
[Shiroq AL-Megren](#), Johara Khabti, and Hend AL-Khalifah  
Advances in Human-Computer Interaction (*in press*)  
2018
- User Requirements Analysis for a Mobile Augmented Reality Application to Support the Literacy Development of Arabic Children with Hearing Impairment  
[Shiroq AL-Megren](#) and Aziz Almutairi  
Journal of Communication and Information Technology (*in press*)  
2018
- Context-Aware Gossip-Based Protocol for Internet of Things Applications  
Lina Altoaimy, Arwa Alromih, [Shiroq AL-Megren](#), Ghada Al-Hudhud, Heba Kurdi, and Kamal Youcef-Toumi  
Sensors, vol. 18, no. 7, 2233  
2018
- A Predictive Fingerstroke-Level Model for Smartwatch Interaction  
[Shiroq AL-Megren](#)  
Multimodal Technologies and Interaction, vol. 2, no. 3, 38  
2018
- Effect of Exit Placement on Evacuation Plans  
Heba Kurdi, [Shiroq AL-Megren](#), Reham Althunyan, and Asma Almulifi  
European Journal of Operational Research, vol. 269, no. 2, pp. 749-759  
2018
- Conference Proceedings
- Blockchain Use Cases in Digital Sectors: A Review of the Literature  
[Shiroq AL-Megren](#), Shada Alsalamah, Lina Altoaimy, Hessah Alsalamah, Leili Soltanisehat, Emad Almutairi, and Alex 'Sandy' Pentland  
The 2018 IEEE International Conference on Blockchain (*in press*)  
2018
- Assessing the Effectiveness of an Augmented Reality Application for the Literacy Development of Arabic Children with Hearing Impairments  
[Shiroq AL-Megren](#) and Aziza Almutairi  
The 20<sup>th</sup> International Conference on Human-Computer Interaction, pp. 3-18  
2018

## SELECTED PUBLICATIONS

(continued)

Conference Proceedings

- Blind FLM Web-based Tools for Keystroke-level Predictive Assessment of Visually Impaired Smartphone Interaction  
Shiroq AL-Megren, Wejdan Altamimi, and Hend S. Al-Khalifa  
The 16<sup>th</sup> International Conference on Computer Helping People with Special Needs (ICCHP 2018), pp. 338-342  
2018
- Word & Sign: An Augmented Reality Application for Deaf Children  
Aziza Almutairir and Shiroq AL-Megren  
The 5<sup>th</sup> International Conference on Disability and Rehabilitation (*in press*)  
2018
- Preliminary Investigations on Augmented Reality for the Literacy Development of Deaf Children  
Aziza Almutairi and Shiroq AL-Megren  
International Visual Informatics Conference (IVIC 2017), pp. 412-422  
2017
- Blind FLM: An Enhanced Keystroke-level Model for Visually Impaired Smartphone Interaction  
Shiroq AL-Megren, Wejdan Altamimi, and Hend S. Al-Khalifa  
IFIP Conference on Human Computer Interaction (INTERACT 2017), pp. 155-172  
2017
- Comparing Tangible and Multi-touch Interaction for Interactive Data Visualization Tasks  
Shiroq AL-Megren and Roy A. Ruddle  
The 10<sup>th</sup> International Conference on Tangible, Embedded, and Embodied Interaction (TEI 2016), pp. 279-286  
2016
- Comparing Fatigue when Using Large Horizontal and Vertical Multi-touch Interaction Displays  
Shiroq AL-Megren, Ahemd Kharrufa, Jonathan Hook, Amey Holden, Selina Sutton, and Patrick Olivier  
IFIP Conference on Human Computer Interaction (INTERACT 2015), pp. 156-164  
2015
- Theses
- A Tangible User Interface for Interactive Data Visualization  
Ph.D. thesis, 2016  
University of Leeds, Leeds, United Kingdom
- An Evaluation of Extended Duration Multi-touch Interaction  
M.Sc. thesis, 2011  
Newcastle University, Newcastle upon Tyne, United Kingdom
- AraDict: An Add-In Speech Recognition Application to MS Word 2007  
B.Sc. thesis, 2007  
King Saudi University, Riyadh, Saudi Arabia

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## RESEARCH INTERESTS

- Human Computer Interaction
- Accessibility
- Heuristic evaluations and predictive behaviour modelling
- Bio-inspired design and computation
- Multi-agent systems and Unmanned Aerial Vehicles
- Blockchain and Cryptocurrency