

*Curriculum Vitae***ABIR J. HUSSAIN****PERSONAL DETAILS****Contact Details**

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**Education**

- Ph.D. in Image and Signal Processing, 2000, Control System Center, University of Manchester (UMIST), UK  
Thesis: Polynomial Neural Networks and Applications to Image Compression and Signal Prediction
- MSc. In Control and Information Technology, 1997, Control System Center, University of Manchester (UMIST), UK  
Dissertation: Fractal Simulation of Material Damage Accumulation in Cellulosic Fibres
- B.S.Eng. (Hons) in Electronic Computer Systems, 1<sup>st</sup> class degree, 1995, Department of Electronic and Electrical Engineering, University of Salford, UK

**Current Appointment**

- Professor of Machine Learning, August 2018-Present
- Visiting professor Al-Maarif university college, Ramadi City, Iraq, September 2018-Current

**Previous Experience**

- Head of the Applied Computing Research Group, August 2015- August 2020
- 2014-2019, Programme Leader BSc (Hons) Digital and Technology Solutions (Degree Apprenticeship)
- 2014- 2017, visiting professor at CentralSupélec, France
- 24<sup>th</sup> August 2015 – 29<sup>th</sup> August 2015, visiting Researcher at Tongji University, China,
- 2014-2018, Reader (Associate Professor) of Image and Signal Processing, Liverpool John Moores University, UK
- 2001-2014, Senior Lecturer, Liverpool John Moores University, UK
- 2000-2001, Lecturer, De-Montfort University, Leicester, UK
- 1999-2000, Research Engineer, 9A Business Management Solution, Irlam, Manchester, UK

**Professional Bodies**

Member IET, 1993- present  
Member INNS 2014- present  
FHEA (Follow of Higher Education Academy), 2014- present

Member IEEE, 2016- present

## RESEARCH ACTIVITIES

### Research Interests

Neural Networks, Higher-Order Neural Networks, Recurrent Neural Networks, Unsupervised and Supervised Learning, Signal Processing, Time Series Prediction, Image Processing, Image Compression, Video Coding, Video Compression, Predictive Coding, Transform Coding, Telecommunication Fraud Detection, Self-healing, Adaptive System, E-learning and Education, Medical data Analysis and Classifications.

### Outputs

**Summary (Scopus h-index: 15 & 937 citations, Google h-index: 19 & 1548 citations)**

<u>Journal Articles</u>	<u>Books</u>	<u>Book Chapters</u>	<u>Patents</u>	<u>Conference Papers</u>
69	15	9	1	139

### Journal Papers

- [1]. R Al-Shabandar, A Jaddoa, P Liatsis, AJ Hussain, (2021), "A deep gated recurrent neural network for petroleum production forecasting", **Machine Learning with Applications**, 3, 100013.
- [2]. W Khan, A Hussain, SA Khan, M Al-Jumailey, R Nawaz, P Liatsis, (2021), "Analysing the impact of global demographic characteristics over the COVID-19 spread using class rule mining and pattern matching", **Royal Society Open Science**, 8 (1), 201823.
- [3]. JK Alwan, AJ Hussain, DH Abd, AT Sadiq, M Khalaf, P Liatsis, (2021), "Political Arabic Articles Orientation Using Rough Set Theory with Sentiment Lexicon", **IEEE Access**.
- [4]. R. Nooripour, S. Hosseini, A. J. Hussain, M. Annabestani, A. Maadal, L. E Radwin, P. Hassani-Abharian, N.G. Pirkashani, A. Khoshkonesh, 2021, "How Resiliency and Hope Can Predict Stress of Covid-19 by Mediating Role of Spiritual Well-being Based on Machine Learning", **Journal of religion and health**, pp. 1-16.
- [5]. H Alaskar, AJ Hussain, W Khan, H Tawfik, P Trevorror, P Liatsis, Z Sbaï, 2020, "A data science approach for reliable classification of neuro-degenerative diseases using gait patterns", **Journal of Reliable Intelligent Environments**, 6 (4), pp. 233-247.
- [6]. Wasiq Khan, Abir J. Hussain, Haya Alaskar, Thar Baker, Fawaz Ghali, A Dhiya, Ahmed Al-Shamma'a, 2020, "Prediction of Flood Severity Level via Processing IoT Sensor Data Using a Data Science Approach" **IEEE Internet of Things Magazine**, 3 (4), pp. 10-15.
- [7]. N. Kleanthous, A. J. Hussain, W. Khan, P. Liatsis, (2020) "A new machine learning based approach to predict Freezing of Gait", **Pattern Recognition Letters**, Volume 140, Pages 119-126, <https://doi.org/10.1016/j.patrec.2020.09.011>.
- [8]. M. Khalaf, H. Alaskar, A. Hussain et al., (2020) "IoT-Enabled Flood Severity Prediction via Ensemble Machine Learning Models," **IEEE Access**, vol. 8, pp. 70375-70386, doi: 10.1109/ACCESS.2020.2986090.
- [9]. B. A. Al-Maytami, P. Fan, A. J. Hussain, T. Baker, P. Liatsis, (2020), "An efficient queries processing model based on Multi Broadcast Searchable Keywords Encryption (MBSKE), **Ad Hoc Networks**, Volume 98, <https://doi.org/10.1016/j.adhoc.2019.102028>.
- [10]. M. A Almansor, C. Zhang, W. Khan, A. Hussain, N. Alhusaini, (2020), "Cross Lingual Sentiment Analysis: A Clustering-Based Bee Colony Instance Selection and Target-Based Feature Weighting Approach", **Sensors**, 20, 5276.
- [11]. W. Khan, A. Hussain, K. Kuru, H. Al-askar, (2020), "Pupil Localisation and Eye Centre Estimation Using Machine Learning and Computer Vision", **Sensors**, 20, 3785.
- [12]. Z. Ahmed, A.J. Hussain, W. Khan, T. Baker, H. Al-Askar, J. Lunn, R. Al-Shabandar, D. Al-Jumeily, P. Liatsis, (2020), "Lossy and Lossless Video Frame Compression: A Novel Approach for High-Temporal Video Data Analytic", **Remote Sensing**, 2, 1004.
- [13]. M. Alloghani, A. Aljaaf, A. Hussain, et al. (2019), "Implementation of machine learning algorithms to create diabetic patient re-admission profiles" **BMC Medical Informatics and Decision Making**, 19, 253, <https://doi.org/10.1186/s12911-019-0990-x>

- [14].R. Al-Shabandar, A. Hussain, P. Liatsis, R. Keight (2019), "Detecting At-Risk Students with Early Interventions Using Machine Learning Techniques", **IEEE Access**, vol. 7, pp. 149464-149478, 2019, doi: 10.1109/ACCESS.2019.2943351.
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- [16].H. Alaskar, A. Hussain, N. Al-Aseem, P. Liatsis, D. Al-Jumeily (2019), "Application of Convolutional Neural Networks for Automated Ulcer Detection in Wireless Capsule Endoscopy Images", **Sensors**, Vol. 19, No. 6, PP. 1265.
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- [22].A Alsadhan, A Hussain, P Liatsis, M Alani, H Tawfik, P Kendrick, H Francis, (2019) "Locally Weighted Classifiers for Detection of Neighbour Discovery Protocol DDoS and Replayed Attacks" **Transactions on Emerging Telecommunications Technologies**, In press
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- [24].A. Hussain, D. Al-Jumeily, A. Kaky, N. Radi, (2018), "Backpropagation Approach Supported by Image Compression Algorithm for the Classification of Chronic Condition Diseases", **IEEE/ACM Transactions on Computational Biology and Bioinformatics**, In press
- [25].R. Al-Shabandar, A. Hussain, P. Liatsis, R. Keight, (2018) "Analyzing Learners Behavior in MOOCs: An Examination of Performance and Motivation Using a Data-Driven Approach", **IEEE Access**, Vol. 6, pp. 73669-73685
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- [53]. D. Reid, A. J. Hussain, H. Tawfik, (2014), "Financial Time Series Prediction Using the Spiking Neural Networks", **PloS ONE**, 9(8): e103656. doi:10.1371/journal.pone.0103656, ISI Impact factor 4.09.
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## Books

- [1]. De-Shuang Huang, Vitoantonio Bevilacqua, Abir Hussain, *Intelligent Computing Theories and Application: 16th International Conference, ICIC 2020, Bari, Italy, October 2–5, 2020, Proceedings, Part I*.

- [2]. D. Huang, Z. Huang, A. Hussain, "Intelligent Computing Methodologies" - 15th International Conference, ICIC 2019, Nanchang, China, August 3-6, 2019, Proceedings, Part III. Lecture Notes in Computer Science 11645, Springer 2019, ISBN 978-3-030-26765-0
- [3]. D. Huang, M. Michael Gromiha, K. Han, A. Hussain, "Intelligent Computing Methodologies", 14th International Conference, ICIC 2018, Wuhan, China, August 15-18, 2018, Proceedings, Part III. Lecture Notes in Computer Science 10956, Springer 2018, ISBN 978-3-319-95956-6.
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- [5]. H. Hamdan, D. Al-Jumeily, A. Hussain, H. Tawfik and J. Hind, Proceedings of the tenth International Development of E-Systems Engineering", DeSE17, Published by the IEEE Computer Society, ISBN: 978-1-5386-1721-2, 2017.
- [6]. D. Al-Jumeily, A. Hussain, H. Tawfik, H. Hamdan, T. Dawson and J. Hind, Proceedings of the Nine International Development of E-Systems Engineering", DeSE16, Published by the IEEE Computer Society, ISBN: 9781-5090-5486-2, 2016.
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- [9]. Dhiya Al-Jumeily, Abir Hussain, C. Mallucci, C. Oliver, "Applied Computing in Medicine and Health", Morgan Kaufmann, July 2015, ISBN-10: 0128034688.
- [10]. Dhiya Al-Jumeily, Abir Hussain, "Beyond it, Digital Models of 8 Monuments from Romania", Published by LJM U, ISBN: 078-1-902-560-30-4, 2014.
- [11]. George Papadopoulos, Abir Jaafar Hussain, Dhiya Al-Jumeily, Naeem Radi, Alex Dobb, "Proceedings of the Seventh International Development of E-Systems Engineering", DeSE14, Publish by LJM U, ISBN: 978-1-902560-29-8, 2014.
- [12]. Abir Hussain, Dhiya Al-Jumeily, Hissam Tawfik, Naeem Radi, Roxana Radvan, "Proceedings of the Six International Development of E-Systems Engineering", DeSE13, Published by the IEEE Computer Society, 2013.
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- [14]. Hissam Tawfik, Abir Hussain, Dhiya Al-Jumeily, Atulya K. Nagar, Panos Liatsis, "Proceedings of the Third International Development of E-Systems Engineering", DeSE10, Published by the IEEE Computer Society, ISBN 978-1-4244-8044-9, 2010.
- [15]. Dhiya Al-Jumeily, Atulya Nagar, Hissam Tawfik, Abir Hussain, Paulo Lisboa "Proceedings of the Second International Development of E-Systems Engineering", DeSE09, Published by the IEEE Computer Society, ISBN 978-1-4244-5401-3, 2009.

## Chapters in Books

- [1]. Mohamed Alloghani, Dhiya Al-Jumeily, Jamila Mustafina, Abir Hussain, Ahmed J Aljaaf, 2020, "A Systematic Review on Supervised and Unsupervised Machine Learning Algorithms for Data Science", Supervised and Unsupervised Learning for Data Science by Michael W. Berry, Azlinah Mohamed and Bee Wah Yap, ISBN: 978-3-030-22474-5, pp 3-21, Springer
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- 04959-5, Book Series: Advanced in Intelligent and Soft Computing, Volume 264, pp 359-369, 2014.
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- [95]. A.J. Hussain, S., Morgan, D. Al-Jumeily, "How Does ICT Affect Teaching and Learning Within Schools", 4th International Conference on Development in E-Systems Engineering, DESE11, ISBN: 978-0-7695-4593-9, Dubai, UAE, 2011
- [96]. Z. Ahmed, A.J. Hussain, D. Al-Jumeily, "Enhanced Computation Time for Fast Block Matching Algorithm", 4th International Conference on Development in E-Systems Engineering, DESE11, ISBN: 978-0-7695-4593-9, Dubai, 2011.
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- European Symposium on Computer Modeling and Simulation, EMS2008, ISBN 978-0-7695-3325-4, Liverpool, UK, pp.253-256, 2008.
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## GRANTS

### Project External Funding

- LivingLens- LJMU KTP (PI), (2017- 2020), "The analysis of LivingLens data Using Data Science Approaches", **£318,000**
- The Douglas Bomford Trust, (PI), "24/7 Monitoring of Grazing Livestock", (2017-2020), **£44,905**
- Royal Academy of Engineering, Newton Research Collaboration Programme-RCP1617/5/67, (PI), "A Data Science Approach for the Detection of Variable Light Sources in Uneven Time-Domain Astronomy", (2016-2017), **£6000**
- WarnDry Phase 2 SBRI (CI): "The development of prediction system for detection of bed wetting in children", (2015- 2016), this is a £1,000,000 funding with **£102,775 LJMU share**.
- Al-Khawarizmi International College (UAE) (PI): "Medical Data Image Compression for Mobile Devices", (2015-2018), **£52,350.00**.
- New Mind: LJMU KTP (CI): "Data analysis and visualisation", (2015-2016), **£60,000**.
- Ministry of Higher Education (Iraq) (CI): "Scientific Research Experimentation", (2011-2017), **£45,000.00**.
- British Council (CI): Delphi-project "Developing Research and Curricula at Al Anbar University", 2011 –2012, (A/02417-DFID DelPHE-Iraq). **£50,072.40**.

## ENTERPRISE



- Teaching and Research training Programme for Academics, Anbar University, Iraq (CI): (4 weeks Training, started 4th of October 2011), **£35,952.00**, (Code: G263005).
- Teaching and Research training Programme for Academics, Anbar University, Iraq, (CI): (4 weeks Training, started 3rd November 2011). **£44,955.00**, (Code: G263003).

## RESEARCH ASSISTANTS MANAGED PREVIOUSLY

- Dr. Mohammed Mehyoub
- Dr. Jade Hind

## PREVIOUS RESEARCH SUPERVISION:

Name	Dates	Degree	Present Position
<b>Director of Study:</b>			
Natasa Orphanidou	2017-2021	PhD	Researcher
Abeer Al-Sadhan	2016-2019	PhD	Assistant Professor, KSA
Mohamed Khalaf	2014-2018	PhD	Assistant Professor, Iraq
Rounaq Abbas	2015-2018	MPhil	Medical Doctor, Iraq
Haya Alaskar	2011-2014	PhD	Assistant Professor, Salman Bin Abdulaziz University, Saudi Arabia
Zeynab Ahmed	2010-2014	PhD	Assistant Professor, Baghdad University, Iraq
Naeem Radi	2006-2012	PhD	CEO of Al-kawarizmi University, UAE
Asmaa Mehdi	2009-2010	MPhil	Researcher, Iraq
Rozaida Ghazali	2005-2008	PhD	Associate Professor, Universiti Tun Hussein Onn Malaysia, Malaysia
Ali Al-Fayadth	2006-2009	PhD	Associate Professor, College Kufa University, Iraq
Adam Knowles	2005-2006	MPhil	Researcher at University of York, UK
<b>Second Supervisor:</b>			
Mohamed Alzawi	2006-2012	PhD	Institute of Applied Technology, UAE
Mohammed Alghamdi	2012-2016	PhD	Assistance Professor, KSA
Glyn Hughes	2014-2017	MPhil	Senior Lecturer, LJMU
Ibrahim Idowu	2013-2017	PhD	Researcher – UK
Ahmed Kaky	2013-2017	PhD	Assistance professor – Iraq
Raghad Al-Shahbandar	2015-2018	PhD	Engineer- Iraq
Jade Hind	2015-2019	PhD	KTP associate, Liverpool, UK
Ala AlKafri	2015-2019	PhD	RA, Liverpool John Moores, UK
Mohamed Alloghani	2015-2019	PhD	Working in Seha, UAE
<b>Third Supervisor:</b>			
Phillip Kendrick	2015-2018	PhD	Lecturer, Liverpool John Moores University
Paul Ross McWhirter	2015-2018	PhD	RA, Liverpool John Moores University

## CURRENT MPHIL AND PHD SUPERVISION

Name	Start Date	Degree	Research Title
<b>Director of Study:</b>			
Shatha Ghareeb	2019	PhD	Students levelling
<b>Second Supervisor:</b>			
Robert Keight	2015	PhD	Headache Data Analysis
Hiba Al-Smadi	2017	PhD	Intelligent Approach to Improve Long-Term Follow-Up of Chronic Disease

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Sin Ying Tan	2017	PhD	An Investigation into the Development of an Intelligent Framework to Support Behavioural Tracking and Analysis
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## OUTREACH ACTIVITIES

### Editorial Board Memberships

- Editorial board member of Cogent Engineering, Taylor and Francis, 2015-Present.
- Academic Editor of PloS ONE, Plos.org, March 2018-Present.
- Academic Editor of Neural Networks, Elsevier, September 2019-present
- Guest Editor: Special Issue in Sensors, “Robotics, Sensors and Industry 4.0”, 2019
- Guest Editor: Special Issue in Sensors, “Data Science and Internet of Everything (IoE)”, 2018
- Guest Editor: Special Issue in the International Journal of Artificial Intelligence and Soft Computing “Novel Applications of AI for Medical and Engineering Systems” (IJAISC), 2013.
- Editor of the conference proceeding for the 6th International Conference on Development on E-Systems Engineering, DESE13, Abu Dhabi, 2013
- Editor of the conference proceeding for the 4th International Conference on Development on E-Systems Engineering, DESE11, Dubai, 2011
- Editor of the conference proceeding for the 3rd International Conference on Development on E-Systems Engineering, DESE10, London, 2010.
- Editor of the conference proceeding for the 2nd International Conference on Development on E-Systems Engineering, DESE09, Abu Dhabi, 2009.
- Editorial board member of Cogent Engineering, Taylor and Francis, 2015-

### Research Funding Organization Reviewer

- UKRI, UK (2018-present)
- National Research Foundation, UAE (2013-present)

### Journal Articles Reviewer

- Neurocomputing, Elsevier
- IEEE Transactions on Neural Networks journal, IEEE
- IEEE transactions on System Man and cybernetics (B) journal, IEEE
- Soft Computing journal, Springer
- Journal of Engineering manufacture, SAGE Journal
- International Journal of Computer Systems Science and Engineering, CSSE journal
- Expert systems, Wiley
- IET Image Processing, IET
- Neural Computing and Applications, Springer
- Image and Vision Computing, Elsevier
- Applied Soft Computing, Elsevier
- Fuzzy Sets and Systems, Elsevier

### Conference Articles Reviewer

The International Joint Conference on Neural Networks 2014, IEEE SSCI 2014, The International Joint Conference on Neural Networks 2013, the 3<sup>rd</sup> International Conference on Computational Intelligence, Communication Systems and Networks, 2011, Innovations in Information Technology 2006, the 2007 International Joint Conference on Neural Networks (IJCNN), EUSIPCO 2007, the 2007 IEEE

International Conference on Signal Processing and Communication (ICSPC07), MICAI-2007, EMS2008, WMSCI 2008, Third International Conference on Modelling, Simulation, and Applied Optimization (ICMSAO'09), IJCNN 2009, UKSim 13th International Conference on Computer Modelling and Simulation.

### Technical Conference Program Committee and Chair

- Programme co-chair, 14th International Conference on Intelligent Computation, Wuhan, China, 2018
- General Co-chair, 13th International Conference on Intelligent Computation, Liverpool, UK, 2017
- Tutorial Chair, 12th International Conference on Intelligent Computation, Lanzhou, China, 2016
- Invited Special Sessions Chair, 22nd International Conference on Systems, Signals and Image Processing, IWSSIP 2015, London, UK
- Program committee co-chair for the International Conference on Intelligent Computing, Fuzhou, China, 2015.
- Competition chair for the International Joint Conference on Neural Networks, IJCNN, Killarney, Ireland, 2015.
- Publicity co-chair for the International Conference on Intelligent Computing, Taiyuan, China, 2014.
- The 3-rd International Conference on Emerging Intelligent Data and Web Technologies, Bucharest, Romania, 2012.
- Fourth European Symposium on Computer Modelling and Simulation, Pisa, Italy, 2010.
- The 19th International Conference on Systems, Signals and Image Processing (IWSSIP), Vienna, Austria, 2012.
- 5<sup>th</sup> European Modelling Symposium on Mathematical Modelling and Simulation, Madrid, Spain, 2011.

### Thesis Examiner:

Name	Dates	Degree	University
<b>External Examiner:</b>			
David Traore	2020	PhD	University of Buckingham
Hailun Xie	2020	PhD	Northumbria University
Adamu Ali-Gombe	2019	PhD	Robert Gordon University
Dheyaa Ahmed Ibrahim	2018	PhD	University of Buckingham
Mohammed Duraid	2017	PhD	University of Salford
Mohamed Al Mashrgy	2015	PhD	Concordia University, Canada
Baris Yuce	2012	PhD	Cardiff University
Lixin Pang	2010	MPhil	City University
Ahmed Najim	2009	MPhil	Cardiff University
<b>Internal Examiner:</b>			
Samuel Ryecroft	2021	PhD	Liverpool John Moores University
Carl Chalmers	2017	PhD	Liverpool John Moores University
Simon Chambers	2015	PhD	Liverpool John Moores University
Faisal Alsheed	2014	PhD	Liverpool John Moores University
Chunlin Song	2012	PhD	Liverpool John Moores University
Sareer Badshah	2007	PhD	Liverpool John Moores University

### C.7. Keynote Speakers:

- Keynote speaker at the International Conference on Information and Communication, Baghdad, Iraq.
- Invited Keynote speaker at the AI in Health and Care workshop, organised by the **Royal Society** and the Academy of Medical Sciences in 29th of March 2019 in which she delivered a talk titled “the use of AI in medical applications”, Abir’s work was highlighted in their event report: <https://royalsociety.org/-/media/policy/Publications/2019/29-03-19-ai-in-health-and-care-discussion-notes.pdf>
- Keynote speaker at the 1<sup>st</sup> Conference Applied Computing Research Innovation and Technology (ACRIT 2019), Ramadi City, Iraq  
<http://www.acritt.org.uk/wp/acrit-conferences/#1539782055219-c70456df-d1cd>
- Keynote speaker at Six International Conference on Digital Information, Networking, and Wireless Communications (DINWC2018), University of Lebanon, Lebanon.  
<http://sdiwc.net/conferences/6th-international-conference-on-digital-information-networking-and-wireless-communications/keynote-speakers/>
- Keynote speaker at the Second International Conference on Internet of Things, Data and Cloud Computing (ICC 2017), University of Cambridge, United Kingdom  
<http://icc-conference.org/index.php/keynote-speakers>
- Keynote speaker at Third International Conference on Electrical and Electronic Engineering, Telecommunication Engineering, and Mechatronics (EEETEM2017)  
<http://sdiwc.net/conferences/eeetem2017/keynote-speakers/>
- Keynote speaker at the Sixth International Conference on Digital Information Processing and Communications (ICDIPC 2016)  
<http://sdiwc.net/conferences/icdipc2016/keynote-speaker/>
- Keynote speaker at the Third International Conference on Electrical, Electronics, Computer Engineering and their Applications (EECEA 2016)  
<http://sdiwc.net/conferences/eecea2016/keynote-speakers/>
- Keynote speaker at The Third International Conference on Education Technologies and Computers (ICETC 2016)  
<http://sdiwc.net/conferences/icetc2016/keynote-speaker/>
- Invited Speaker at Tongji University (2015), China.
- Keynote speaker at the Third International Conference on Technological Advances in Electrical, Electronics and Computer Engineering (TAECE2015), Lebanon.  
<http://sdiwc.net/conferences/taeece2015/keynote-speakers/>
- Keynote speaker at the Fifth International Conference on Digital Information and Communication Technology and its Applications (DICTAP2015), Lebanon  
<http://sdiwc.net/conferences/dictap2015/keynote-speakers/>
- Invited speaker at Supelec (2014), France
- Invited speaker to the 2nd IEEE International Workshop on Mobile Consumer Health Care Networks, Systems and Services (MobiCHeSS’13), UAE.

### TEACHING ACTIVITIES

### **MSc Student Supervisions in LJMU**

- Supervising over 100 MSc project students in various technical areas (2001-Present)

### **Module Taught in LJMU**

- Contemporary Software Development, 6129COMP, BSc (Level 6), Liverpool John Moores University, 2018-present (Average number of students 30, 5 hrs/week, semesters 1).
- Database systems, BSc (Level 5), Liverpool John Moores University, 2019-Present. (Average number of students 20, 1 hrs/week lecture, semesters 2).
- Computer Systems, 4101COMP, (level 4), Liverpool John Moores University, 2014-2018 (Average number of students 300, 3 hrs/week, semester 1).
- Computer Systems Architecture, 4008COMP, BSc (level 4), Liverpool John Moores University, 2002-2014 (Average number of students 300, 3 hrs/week, semester 2).
- Online MSc project, MSc, Liverpool John Moores University, 2010-Present (Average number of students 10, Online delivery, semesters 1 and 2).
- Advanced Software Development, 6044COMP, BSc (Level 6), Liverpool John Moores University, 2012-2018 (Average number of students 30, 3 hrs/week, semesters 1 and 2).
- Introduction to Programming, 4001COMP, BSc (level 4), Liverpool John Moores University, 2004-Present (Average number of students 200, 2 hrs/week, semesters 1 and 2).
- Computer Systems Architecture, 4002ONLINE, BSc (level 4), Liverpool John Moores University, 2009-2014 (Average number of students 5, Online delivery, semesters 1 and 2).
- Database Design and Connectivity, BSc (Level 5), Liverpool John Moores University, 2009-2017. (Average number of students 250, 2 hrs/week, semesters 1 and 2).
- Computer Graphics, BSc (Level 6), Liverpool John Moores University, 2001-2007 (Average number of students 60, 3 hrs/week, semester 1).
- Advanced Computer Graphics, MSc, Liverpool John Moores University, 2001-2007.
- Contemporary issues in IT, Summer course (TAR), BSc (Level 6), Liverpool John Moores University, 2007 (Average number of students 30, 3 hrs/week, Summer course).
- Digital Multimedia Tools, GN1007, BSc (Level 4), Liverpool John Moores University, 2005-2007 (Average number of students 30, 2 hrs/week, semesters 2).
- Software Engineering Theory, Liverpool John Moores University, 2005 (Average number of students 15, 3 hrs/week, semesters 2).

### **ADMINISTRATIVE**

- March 2015-Present, Member of the Research and Scholarship Faculty Committee representing the Female Researchers.

- September 2016-Present, Member of the University Ethical Committee representing the Faculty of Engineering and Technology.
- February 2015 - Present, Member of the Department Management Team (DMT).
- 2016- Present: Mentoring Dr. Paul Bill (Senior Lecturer).
- 2016- Present: Mentoring Dr. Hoshang Kolivand (Senior Lecturer).
- 2017– 2018: Mentoring Dr. Abir Awad (Senior Lecturer).
- June 2014- February 2016: Mentoring Dr. Natalia Pacheco (senior lecturer)
- June 2014- September 2015: Mentoring Dr. Chelsea Dobbins (senior lecturer)
- 2012-present: Member of the Department Academic Recruitment Team, Department of Computer Science, Liverpool John Moores University, UK. This includes the interviews for grade 9 Principle Lecturer positions and Professorship in Software Engineering.
- 2015- present: Member of the School Academic Recruitment Team, School of Engineering, Liverpool John Moores University, UK.
- February 2016: Member of the Department of Sport Science Academic Recruitment Team.
- 2010- 2016: Online MSc Project Tutor.
- 2003-2010: Full Time MSc Project Tutor.
- 2011–2012: Deputy Programme Leader for Online MSc Courses in Computing, Liverpool John Moores University, UK.
- 2011–2012: Deputy Programme Leader for Online BSc Course in Computing, Liverpool John Moores University, UK.

## **TRAINING**

- Leadership foundation for higher education, Aurora program, 2013.
- Springboard Women development programme, 2016