

Thar M B Shamsa (PhD, Associate Professor)
(Best individual teacher award from LJMU, UK)

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Personal Information

Preferred Name	Thar Baker
Current Position	Associate Professor
Citizenship	British
Marital status	Married (have 2 kids)
Affiliation	University of Sharjah
Business Address	Department of Computer Science College of Computing and Informatics United Arab Emirates
Email	tshamsa@sharjah.ac.ae

Highlights

Research outcome	Published 160+ peer reviewed international publications (80 journals, 75 conference papers and 9 book chapters).
Research funding	Secured over £470k funding from national and international, commercial and non-commercial sources.
Supervision experience	Successfully supervised and completed 6 PhD students, and am currently supervising 9 PhD students
Teaching awards	Awarded the LJMU Vice Chancellor's Individual Teaching Award in 2017; and Best Overall Teaching Award from MMU in 2012.
Professional activities	Associate Editor of 3 International journals of Elsevier, Guest Editor of 4 international journals, and co-/Chair/TPC of 50+ international conferences. Member of 2 prestigious and internationally influencing committees of the British Computer Society (BCS): Higher Education Qualifications (HEQ) panel and Professional Examination Board (PEB). Expert Evaluator of EU H2020 NGI, UNISCO grant, British Council (BC) Institutional Links and Research Workshops grants, and UAE ICTFund projects.

External Profiles

Google Scholar	https://scholar.google.com.au/citations?user=MY6aS_MAAAAJ&hl=en
Scopus	https://www.scopus.com/authid/detail.uri?authorId=34267505000
ORCID	https://orcid.org/0000-0002-5166-4873
dblp	https://dblp.uni-trier.de/pers/hd/b/Baker:Thar
ResearchGate	https://www.researchgate.net/profile/Thar_Baker

Publons <https://publons.com/researcher/1095659/thar-baker/>

Research Interests

Parallel and distributed systems
Software Engineering (applied to cloud/edge computing)
Internet of Things (IoT)
High-performance computing
Performance tools
Scheduling and optimisation
Energy efficiency

Education

2007 – 2010 PhD in Computer Science / Computing, Liverpool John Moores University (LJMU), Department of Computer Science, (UK)
2009 – 2011 PgCert in Post Graduate Certificate in Teaching and Learning in Higher Education (Master level), Liverpool John Moores University (LJMU), Faculty of Education, (UK)
2003 – 2005 MSc in Computer Science / Software Engineering, Amman University, Department of Computer Science, (Jordan)
2001 – 2002 PgD Computer Science / Data Security, University of Technology, Department of Computer Science, (Iraq)
1995 – 1999 BSc in Computer Science, University of Baghdad, Department of Computer Science, (Iraq)

Other Qualifications & CPDs

2015 – 2016 Stellar HE. Strategic Executive Development Programme, Certificate for Diverse Leaders, Diversity Practice, (UK)
2015 – 2016 Agile Project Management (AgilePM) Certificate. Agile Project Management Group (APMG) International, (UK)
2014 – 2015 External Examining course by HEA, (UK)
2014 – 2015 Use of Canvas VLE in Higher Education, Liverpool John Moores University (LJMU), (UK)
2013 – 2014 Managing a Collaborative Research Project, Liverpool John Moores University (LJMU), (UK)

- 2013 – 2014 Diversity in the workplace, Liverpool John Moores University (LJMU), (UK)
- 2013 – 2014 Data Protection, Liverpool John Moores University (LJMU), (UK)
- 2013 – 2014 Bribery Act, Liverpool John Moores University (LJMU), (UK)
- 2013 – 2014 Research Supervision Course, Liverpool John Moores University (LJMU), (UK)
- 2013 – 2014 Making Your Course Mobile Friendly - An Introduction to the Blackboard Mobile Application, Liverpool John Moores University (LJMU), (UK)
- 2011 – 2012 A full-course in Post Graduate Students Supervision and Examination, Manchester Metropolitan University (MMU), (UK). Counted as 1 successful PhD supervision completion
- 2012 – 2013 CPD in Writing Effective Research/Grant Proposals for UK & EU Funding Bodies. GRANTfinder: an idox solution in collaboration with Manchester Metropolitan University (MMU), (UK)
- 2012 – 2013 Using of Moodle VLE on the Go, Manchester Metropolitan University (MMU), (UK)
- 2008 – 2009 CPD in Teaching and Learning in Higher Education, Liverpool John Moores University (LJMU), Faculty of Education, Community and Leisure, CPDs included: Preparing to Teach, Working with Large Group, Small Group Teaching, and Teaching in Lab.

Academic Positions

- 2020 – Present Associate Professor, Department of Computer Science, College of Computing and Informatics, University of Sharjah, (UAE)
- 2019 – 2020 Reader in Autonomic Cloud Engineering. Department of Computer Science, Liverpool John Moores University (LJMU), (UK)
- 2013 – 2019 Senior Lecturer in Software Systems Engineering. Department of Computer Science, Liverpool John Moores University (LJMU), (UK)
- 2011 – 2013 Lecturer (Assistant Professor) in Software Engineering. School of Computing, Mathematics, and Digital Technology, Manchester Metropolitan University (MMU), (UK)

2010 – 2011 Post-Doctoral Research Associate (PDRA) in Cloud Systems Engineering, Department of Computer Science, Liverpool John Moores University (LJMU), (UK)

Admin Duties

2019 – Present Deputy Research Head of Department of Computer Science in the Faculty Research Degree Committee (FRDC). Liverpool John Moores University (LJMU), (UK)

2017 – Present Head of Applied Computing Research Group (ACRG). Department of Computer Science, Liverpool John Moores University (LJMU), (UK)

2017 – Present Head of International Mobility, Department of Computer Science, Liverpool John Moores University (LJMU), (UK)

2011 – 2013 Programme Leader for B.Sc. Web and Mobile Computing, Manchester Metropolitan University (MMU), (UK).

2011 – 2013 Programme Leader for B.Sc. Software Engineering, Manchester Metropolitan University (MMU), (UK)

Research Grants - External (£470K)

2019 – 2021 Development of an innovative flexible manufacturing product life cycle management (PLM) system knowledge transfer partnership between Liverpool John Moores University and AMF Precision Engineering Limited, £180k

2018 – 2019 Social Media mining for detecting social and economic crimes using data analytic techniques, CLUSTER Fund, UAE £30k

2018 – 2019 Patient Management System Support by Crowdsourcing for the Benefit of Iraqi Hospitals, Research Engagement, Anbar Uni. Iraq, £20k

2017 – 2018 FIREWORKS: Future wIREless community netWORKs Storage, Research & Knowledge Exchange, £15k

2016 - 2017 IUATS-advanced school on Off-grid with India, Newton Fund, British Council, £10k

2016 – 2017 Everything as a resource computing paradigm, Google Research Fund, £10k

2013 - 2015 Sustainability programme development – (Industry-based educational programme), NWDA and NWUA, £180k

2013 - 2014 e-Staff Management System, Fusion21, KTP, £25k

Research Grants - Internal (£102K)

- 2018 – 2019 Tackling Food Wastage with InteRnet Of ThiNgs Technology: From Farm to Fork, LJMU Knowledge Exchange & Innovation Funding Voucher, £12k
- 2017 – 2018 Future EU wIREless community netWORKs Storage; HEIF LJMU Knowledge Exchange & Innovation Funding Voucher schemes: £10,000
- 2017 – 2018 Citizen-to-Citizen Network for Next Generation Internet, Pump Priming FET Award, £5000
- 2017 - 2018 Dean PhD Scholarship, Trustworthiness Oriented Fog-to-Fog Collaboration Model. £60k
- 2017 – 2018 Faculty of Engineering and Technology Equipment Fund, £5000
- 2017 – 2018 Protecting the privacy of users in smart cyber-physical systems, Pump Priming FET Award, £5000
- 2013 - 2014 International Collaborative Programme, Liverpool John Moores University (UK) and Zaragoza University (Spain). £5k

Journal Publications (last 5 years)

1. Javed AR, Sarwar MU, Beg MO, Asim M, Thar Baker, Tawfik H. (2020). “A collaborative healthcare framework for shared healthcare plan with ambient intelligence”, *Human-centric Computing and Information Sciences*, Springer
2. Bu F, Hu C, Zhang Q, Bai C, T. Yang L, Thar Baker. (2020). “A Cloud-Edge-aided Incremental High-order Possibilistic c-Means Algorithm for Medical Data Clustering”, *IEEE Transactions on Fuzzy Systems*,
3. Al-khafajiy M., Otoum s, Thar Baker, Asim M., Maamar Z., Aloqaily M., Taylor M., Randles M. (2020). “intelligent control and security of fog resources in healthcare systems via a cognitive fog model”, *ACM Transactions on Internet Technology*,
4. Zhang Q, Zhao Y, Wang Y, Thar Baker, Zhang J, Hu J. (2020). “Towards Cross-task Universal Perturbation against Black-box Object Detectors in Autonomous Driving”, *Computer Networks*, 180
5. Yuan Y, Liang C, Chen X, Thar Baker, Fu X. (2020). “Adaptive Fuzzy Game-based Energy Efficient Localization in 3D Underwater Sensor Networks”, *ACM Transactions on Internet Technology*,
6. Zhao Q, Chen S, Liu Z, Thar Baker, Zhang Y. (2020). “Blockchain-Based Privacy-Preserving Remote Data Integrity Checking Scheme for IoT Information Systems”, *Information Processing and Management*,

7. Yousefi F, Kolivand H, Thar Baker, (2020). "SaS-BCI: A New Strategy to Predict Image Memorability and use Mental Imagery as a Brain-Based Biometric Authentication" *Neural Computing and Applications*,
8. Khan W, Hussain A, Alaskar H, Thar Baker, Ghali F, Al-Jumeily D, Al-Shamma'a A. (2020). "Prediction of Flood Severity Level Via Processing IoT Sensor Data Using Data Science Approach" *IEEE Internet of Things Magazine*
9. Al-Zu'bi S, Hawashin B, Mughaid A, Thar Baker, (2020). "Efficient 3D Medical Image Segmentation Algorithm over a Secured Multimedia Network", *Multimedia Tools and Applications*,
10. Khan AU, Abbas G, Abbas ZH, Thar Baker, Waqas M. (2020). "Spectrum Efficiency in CRNs using Hybrid Dynamic Channel Reservation and Enhanced Dynamic Spectrum Access" *Ad Hoc Networks*,
11. Najmuddin S, Asim M, Munir K, Thar Baker, Guo Z, Ranjan R. (2020). "A BBR-based Congestion Control for Delay-sensitive Real-time Applications", *Computing*,
12. N D, B P, Kumar Reddy M P, G TR, Thar Baker, M AK, Tariq U. (2020). "An AI-based Intelligent System for Healthcare Analysis Using Ridge-Adaline Stochastic Gradient Descent Classifier" *Journal of Supercomputing*,
13. Alloghani M, Aljaaf A, Hussain A, Thar Baker, Mustafina J, Al-Jumeily D, Khalaf M. (2020). "Implementation of machine learning algorithms to create diabetic patient re-admission profiles" (vol 19, 253, 2019) *BMC medical informatics and decision making*, 20
14. Al Ridhawi I, Otoum S, Aloqaily M, Jararweh Y, Thar Baker, (2020). "Providing Secure and Reliable Communication for Next Generation Networks in Smart Cities", *Sustainable Cities and Society*, 56
15. Hammoudeh M, Epiphaniou G, Belguith S, Unal D, Adebisi B, Thar Baker, Kayes ASM, Watters P. (2020). "A Service-Oriented Approach for Sensing in the Internet of Things: Intelligent Transportation Systems and Privacy Use Cases", *IEEE Sensors Journal*,
16. Feng W, Liu C, Guo Z, Thar Baker, Wang G, Wang M, Cheng B, Chen J. (2020). "MobiGyges: A Mobile Hidden Volume for Preventing Data Loss, Improving Storage Utilization, and Avoiding Device Reboot", *Future Generation Computer Systems: the international journal of grid computing: theory, methods and applications*,
17. Hammoudeh M, Pimlott J, Belguith S, Epiphaniou G, Thar Baker, Kayes ASM, Adebisi B, Bounceur A. (2020). "Network Traffic Analysis for Threats Detection in the Internet of Things", *IEEE Internet of Things Magazine*,
18. Khalaf M, Alaskar H, Hussain AJ, Thar Baker, Maamar Z, Buyya R, Liatsis P, Khan W, Tawfik H, Al-Jumeily D. (2020). "IoT-enabled Flood Severity Prediction via Ensemble Machine Learning Models", *IEEE Access*,

19. Lou K, Yang Y, Wang E, Liu Z, Thar Baker, (2020). "Reinforcement Learning Based Advertising Strategy Using Crowdsensing Vehicular Data", IEEE Transactions on Intelligent Transportation Systems,
20. Reddy G T, Kumar Reddy M P, Lakshmana K, Kaluri R, Singh Rajput D, Srivastava G, Thar Baker, (2020). "Analysis of Dimensionality Reduction Techniques on Big Data" IEEE Access,
21. Ahmed Z, Hussain A, Khan W, Thar Baker, Al-Askar H, Lunn J, Liatsis P, Al-Jumeily D, Al-Shabandar R. (2020). "Lossy and Lossless Video Frame Compression: A Novel Approach for the High-Temporal Video Data Analytics" Remote Sensing,
22. Al-Khafajiy M, Thar Baker, Asim M, Guo Z, Ranjan R, Longo A, Puthal D, Taylor M. (2020). "COMITMENT: a Fog Computing Trust Management Approach", Journal of Parallel and Distributed Computing, 137 :1-16
23. Javed AR, Beg MO, Asim M, Thar Baker, Al-Bayatti AH. (2020). "AlphaLogger: Detecting Motion-based Side-Channel Attack Using Smartphone Keystrokes", Journal of Ambient Intelligence and Humanized Computing,
24. Khalid U, Asim M, Thar Baker, C. K. Hung P, Adnan Tariq M, Rafferty L. (2020). "A Decentralized Lightweight Blockchain-based Authentication Mechanism for IoT Systems", Cluster Computing,
25. Safara F, Souri A, Thar Baker, Al Ridhawi I, Aloqaily M. (2020). "PriNergy: A Priority-based Energy Efficient Routing Method for IoT Systems", The Journal of Supercomputing,
26. Maamar Z, Asim M, Boukadi K, Thar Baker, Saeed S, Guidara I, Yahya F, Ugljanin E, Benslimane D. (2020). "Towards a Quality-of-Thing based Approach for Assigning Things to Federations", Cluster Computing,
27. Khan MS, Jangsher S, Aloqaily M, Jararweh Y, Thar Baker, (2020). "EPS-TRA: Energy efficient Peer Selection and Time switching Ratio Allocation for SWIPT-enabled D2D Communication", IEEE Transactions on Sustainable Computing,
28. Abbas G, Abbas ZH, Haider S, Thar Baker, Boudjit S, Muhammad F. (2019) "PDMAC: A Priority-based Enhanced TDMA Protocol for Warning Message Dissemination in VANETs", Sensors,
29. Alloghani M, Aljaaf A, Hussain A, Thar Baker, Mustafina J, Al-Jumeily D, Khalaf M. (2019) "Implementation of machine learning algorithms to create diabetic patient re-admission profiles", BMS medical informatics and decision making, 19
30. Huang Y, Li B, Liu Z, Yiu S-M, Thar Baker, Gupta BB. (2020). "ThinORAM: Towards Practical Oblivious Data Access in Fog Computing Environment", IEEE Transactions on Services Computing, [IF: 5.707]
31. Khan MS, Jangsher S, Aloqaily M, Jararweh Y, Thar Baker. (2020). "EPS-TRA: Energy efficient Peer Selection and Time switching Ratio Allocation for SWIPT-enabled D2D Communication", IEEE Transactions on Sustainable Computing

32. Safara F, Soury A, Thar Baker, Al Ridhawi I, Aloqaily M. (2020). "PriNergy: A Priority-based Energy Efficient Routing Method for IoT Systems", *The Journal of Supercomputing*, [IF: 2.157]
33. Al Ridhawi I, Aloqaily M, Kotb Y, Jaraweh Y, Thar Baker. (2019). "A Profitable and Energy-Efficient Cooperative Fog Solution for IoT Services", *IEEE Transactions on Industrial Informatics*, [IF: 7.377]
34. Wang Y, Guo Y, Guo Z, Thar Baker, Liu W. (2019). "CLOSURE: A cloud scientific workflow scheduling algorithm based on attack-defense game model", *Future Generation Computer Systems (FGCS)*, Elsevier, [IF: 5.768]
35. Al-Khafajiy M, Thar Baker, Asim M, Guo Z, Ranjan R, Longo A, Puthal D, Taylor M. (2019). "COMMITMENT: a Fog Computing Trust Management Approach", *Journal of Parallel and Distributed Computing (JPDC)*, Elsevier, [IF: 1.819]
36. Al-Maytami B, Fan P, Hussain A, Thar Baker, Liatsis P. (2019). "An Efficient Queries Processing Model Based on Multi Broadcast Searchable Keywords Encryption (MBSKE)", *Ad Hoc Networks*, Elsevier, [IF: 3.490]
37. Ali Z, Jiao L, Thar Baker, Abbas G, Abbas ZH, Khaf S. (2019). "A Deep Learning Approach for Energy Efficient Computational Offloading in Mobile Edge Computing", *IEEE Access*, [IF: 4.098]
38. Al-Maytami BA, Fan P, Hussain A, Thar Baker, Liatsis P. (2019). "A Task Scheduling Algorithm with Improved Makespan Based on Prediction of Tasks Computation Time algorithm for Cloud Computing", *IEEE Access*, [IF: 4.098]
39. Tariq N, Asim M, Maamar Z, Farooqi Z, Fati N, Thar Baker. (2019). "A Mobile Code-driven Trust Mechanism for Detecting Internal Attacks in Sensor Node-powered IoT", *Journal of Parallel and Distributed Computing (JPDC)*, Elsevier, [IF: 1.819]
40. Abbas G, Abbas ZH, Haider S, Thar Baker, Boudjit S, Muhammad F. (2019). "PDMAC: A Priority-based Enhanced TDMA Protocol for Warning Message Dissemination in VANETs", *Sensors*, MDPI, [IF: 3.031]
41. Alfakeeh AS, Al-Bayatti AH, Siewe F, Thar Baker. (2019). "Agent-based Negotiation Approach for Feature Interactions in Smart Home Systems using Calculus of the Context-aware Ambient", *Transactions on Emerging Telecommunications Technologies*, [IF: 1.258]
42. Alloghani M, Alani MM, Al-Jumeily D, Thar Baker, Mustafina J, Hussain A, Kaky AJ. (2019). "A Systematic Review on the Status and Progress of Homomorphic Encryption Technologies", *Journal of Information Security and Applications*, 48, Elsevier, [IF: 1.537]
43. Kotb Y, Al Ridhawi I, Aloqaily M, Thar Baker, Jararweh Y, Tawfik H. (2019). "Cloud-Based Multi-Agent Cooperation for IoT Devices Using Workflow-Nets" *Journal of Grid Computing*, Springer, [IF: 3.288]

44. Ghobaei-Arani M, Sourì A, Thar Baker, Hussien A. (2019). "ControCity: An Autonomous Approach for Controlling Elasticity Using Buffer Management in Cloud Computing Environment", *IEEE Access*, [IF: 4.098]
45. Haider S, Abbas G, Abbas ZH, Thar Baker. (2019). "DABFS: A Robust Routing Protocol for Warning Messages Dissemination in VANETs", *Computer Communications (COMCOM)*, Elsevier, [IF: 2.766]
46. Al-Khafajiy M, Thar Baker, Al-Libawy H, Maamar Z, Aloqaily M, Jararweh Y. (2019). "Improving Fog Computing Performance via Fog-2-Fog Collaboration", 100 :266-280, *Future Generation Computer Systems (FGCS)*, Elsevier, [IF: 5.768]
47. Mahmmud bm, Ramli ar, Thar Baker, Al-Obeidat F, Abdulhussain SH, Jassim WA. (2019). Speech Enhancement Algorithm Based on Super-Gaussian Modeling and Orthogonal Polynomials, *IEEE Access*, [IF: 4.098]
48. Kallel S, Maamar Z, Sellami M, Faci N, Ben Arab A, Gaaloul W, Thar Baker. (2019). "Restriction-based Fragmentation of Business Processes over the Cloud". *Concurrency and Computation: Practice and Experience*, Wiley, [IF: 1.167]
49. Abbas S, Merabti M, Kifayat K, Thar Baker. (2019). "Thwarting Sybil Attackers in Reputation-based Scheme in Mobile Ad hoc Networks", *KSII Transactions on Internet and Information Systems*,
50. Maamar Z, Kajan E, Asim M, Thar Baker (2019). "Open Challenges in Vetting the Internet-of-Things", *Internet Technology Letters*, Wiley
51. Qamar A, Asim M, Maamar Z, Saeed S, Thar Baker. (2019). "A Quality-of-Things Model for Assessing the Internet-of-Thing's Non-Functional Properties", *Transactions on Emerging Telecommunications Technologies*, Wiley, [IF: 1.258]
52. Maamar Z, Thar Baker, Faci N, Al-Khafajiy M, Ugljanin E, Atif Y, Sellami M. (2019). "Weaving Cognition into the Internet-of-Things: Application to Water Leaks", *Cognitive Systems Research*, Elsevier, 56 :233-245. [IF:1.384]
53. Thar Baker, Asim M, Mac Dermott A, Iqbal F, Kamoun F, Shah B, Alfandi O, Hammoudeh M. (2019). "A Secure Fog-based Platform for SCADA-based IoT Critical Infrastructure", *Journal of Software: Practice and Experience*, Wiley, [IF: 1.931]
54. Saad S, Muhammad A, Thar Baker, Zakaria M. (2019). "A Location-sensitive and Network-aware Broker for Recommending Web Services", *Computing*, Springer, [IF: 2.063]
55. Tariq N, Asim M, Al-Obeidat F, Muhammad Zubair F, Thar Baker, Hammoudeh M, Ghafir I. (2019). "The security of big data in fog-enabled IoT applications including Blockchain: A survey", *Sensors*, MDPI, 19, [IF: 3.031]
56. Ai J, Chen H, Guo Z, Cheng G, Thar Baker, (2019). "Mitigating Malicious Packets Attack via Vulnerability-aware Heterogeneous Network Devices

- Assignment”, *Future Generation Computer Systems (FGCS)*, Elsevier, [IF: 5.768]
57. Iqbal F, Benjamin Y, Shah B, Maryam A, Naeema A, Suaad Q, Thar Baker. (2019). “Drone Forensics: Examination and Analysis”, *International Journal of Electronic Security and Digital Forensics*, 11 :245-264
 58. Abbas N, Asim M, Tariq N, Thar Baker, Abbas S. (2019). “A Mechanism for Securing IoT-enabled Applications at the Fog Layer”, *Journal of Sensor and Actuator Networks*, MDPI, 8, [IF: 2.58]
 59. Al-Khafajiy M, Kolivand H, Thar Baker, Tully D, Waraich A. (2019). “Smart Hospital Emergency System Via Mobile-based Requesting Services”, *Multimedia Tools and Applications*, Springer, [IF: 2.101]
 60. Boukadi K, Faci N, Maamar Z, Ugljanin E, Sellami M, Thar Baker, Al-Khafajiy M. (2019). “Norm-based and Commitment-driven Agentification of the Internet of Things”, *Internet of Things: Engineering Cyber Physical Human Systems*, Elsevier.
 61. Yu C, LAN J, Guo Z, Hu Y, Thar Baker (2019). An Adaptive and Lightweight Update Mechanism for SDN, *IEEE Access*, [IF: 4.098], 7 :12914-12927
 62. Boddy A, Hurst W, Mackay M, El Rhalibi A, Thar Baker, Curbelo Montañez CA. (2019). An investigation into Healthcare Data Patterns, *Future Internet*, MDPI, 11
 63. Al-Khafajiy M, Thar Baker, Chalmers C, Asim M, Kolivand H, Fahim M, Waraich A. (2019). “Remote Health Monitoring of Elderly Through Wearable Sensors”, *Multimedia Tools and Applications*, Springer, [IF: 2.101]
 64. Kendrick P, Thar Baker, Maamar Z, Hussain A, Buyya R, Al-Jumeily D. 2018. An Efficient Multi-Cloud Service Composition Using A Distributed Multiagent-based, Memory-driven Approach”, *IEEE Transactions on Sustainable Computing*,
 65. Oueida S, Kotb Y, Aloqaily M, Jararweh Y, Thar Baker. 2018. An Edge Computing Based Smart Healthcare Framework for Resource Management, *Sensors*, MDPI, [IF: 3.031], 18
 66. Maamar Z, Thar Baker, Sellami M, Muhammad A, Emir U, Faci N. 2018. Cloud versus Edge: Who Serves the Internet-of-Things Better? *Internet Technology Letters*,
 67. Ghafir I, Prenosil V, Hammoudeh M, Thar Baker, Jabbar S, Khalid S, Jaf S. 2018. BotDet: A System for Real Time Botnet Command and Control Traffic Detection, *IEEE Access*, [IF: 4.098]
 68. Thar Baker, Aldawsari B, Asim M, Tawfik H, Maamar Z, Buyya R. 2018. Cloud-SEnergy: A Bin-Packing Based Multi-Cloud Service Broker for Energy Efficient Composition and Execution of Data-intensive Applications Sustainable Computing: *Informatics and Systems*,

69. Ghafir I, Saleem J, Hammoudeh M, Faour H, Prenosil V, Jaf S, Jabbar S, Thar Baker 2018. Security Threats to Critical Infrastructure: The Human Factor *Journal of Supercomputing*,
70. Fahim M, Thar Baker, Khattak AM, Shah B, Aleem S, Chow F. 2018. Context Mining of Sedentary Behavior for Promoting Self-Awareness Using Smartphone, *Sensors*, MDPI, [IF: 3.031]18
71. Hu T, Guo Z, Thar Baker, Lan J. 2018. Multi-controller Based Software-Defined Networking: A Survey, *IEEE Access*, [IF: 4.098], 6 :15980-15996
72. Asim M, Yautsiukhin A, Brucker A, Thar Baker, Shi Q, Lempereur B. 2018. “Security Policy Monitoring of BPMN-based Service Compositions”, *Journal of Software: Evolution and Process*, Wiley, [IF: 1.035]
73. Kolivand H, Mei Fern B, Mohd Rahim MS, Sulong G, Thar Baker, Tully D. 2018. “An expert botanical feature extraction technique based on phenetic features for identifying plant species”, *PLoS ONE*, [IF: 2.776]
74. Thar Baker, Ugljanin E, Faci N, Sellami M, Maamar Z, Kajan E. 2017. “Everything as a Resource: Foundations and Illustration through Internet-of-Things”, *Computers in Industry*, Elsevier, [IF: 4.769] 94 :62-74
75. Thar Baker, Asim M, Tawfik H, Aldawsari B, Buyya R. 2017. “An Energy-aware Service Composition Algorithm for Multiple Cloud-based IoT Applications”, *Journal of Network and Computer Applications (JNCA)*, Elsevier, [IF: 5.273]
76. Aldawsari B, Thar Baker. 2016. “Trusted Energy-Efficient Cloud-based Services Brokerage Platform International”, *Journal of Intelligent Computing Research (IJICR)*, 6 :630-639
77. Thar Baker, Bandar Al Dawsari , Yanik Ngoko , Hissam Tawfik , David Reid . 2015. “GreeDi: An Energy Efficient Routing Algorithm for Big Data on Cloud”, *Ad Hoc Networks*, Elsevier, [IF: 3.490]
78. Thar Baker, Mackay M, Randles M, Taleb-Bendiab A. 2013. Intention-oriented programming support for runtime adaptive autonomic cloud-based applications, *Computers and Electrical Engineering*, Elsevier, [IF: 2.189], 39 :2400-2412
79. Mackay MI, Thar Baker, Al-Yasiri A. 2012. “Security-oriented cloud computing platform for critical infrastructures”, *Computer Law & Security Review*, Elsevier, [IF: 1.552], 28 :679-686
80. Aldawsari B, Thar Baker, Asim M, Maamar Z, Al-Jumeily D, Alkhafajiy M. A Survey of Resource Management Challenges in Multi-cloud Environment: Taxonomy and Empirical Analysis *Azerbaijan Journal of High-Performance Computing*, 1 :51-65
81. Mac Dermott AM, Thar Baker, Buck P, Iqbal F, Shi Q. The Internet of Things: Challenges and considerations for cybercrime investigations and digital forensics *International Journal of Digital Crime and Forensics (IJDCF)*, IGI Global.

82. Al-Room K, Iqbal F, Thar Baker, Shah B, Yankson B, Mac Dermott A, Hung P. "Drones Forensics: A Case Study of Digital Forensic Investigations Conducted on Common Drone Models", International Journal of Digital Crime and Forensics (IJDCF), IGI Global.

Conference Publications

1. Mohammed Al-Khafajiy, Thar Baker, Atif Waraich, Omar Alfandi, Aseel Hussien. (2019). Enabling High Performance Fog Computing through fog-2-fog Coordination Model 16th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA 2019).
2. Hiba Alsmadi, Ahmed Aljaaf, Abir Hussain, Thar Baker, Mallucci C, Hussien A, Al-Jumeily R. (2019). "An Insight into ICP Monitoring of Patients with Hydrocephalus using Data Science Approach", 16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019.
3. Feng W, Liu C, Guo Z, Thar Baker, Cheng B, Chen J. (2019). "Data Loss Prevention and Storage Utilization Improvement of the Hidden Volume on Mobile Devices" IEEE Symposium on Computers and Communications (ISCC).
4. Khan W, Hussain A, KHAN B, Thar Baker, Nawaz R. (2019). "Novel Framework for Outdoor Mobility Assistance and Auditory Display for Visually Impaired People", 12th International Conference on the Developments in eSystems Engineering (DeSE2019: Robotics, Sensors, Data Science and Industry 4.0.)
5. Ai J, Chen H, Guo Z, Cheng G, Thar Baker. (2019). "Improving Resiliency of Software-Defined Networks with Network Coding-based Multipath Routing", IEEE Symposium on Computers and Communications (ISCC)
6. Maamar Z, Cheikhrouhou S, Asim M, Qamar A, Thar Baker, Ugljanin E. (2019). Towards a Resource-aware Thing Composition Approach The (2019) International Conference on High Performance Computing & Simulation (HPCS (2019))
7. Abdulhussain S, Ramli AR, Mahmmod BM, Saripan MI, Al-Haddad SAR, Thar Baker, Flayyih WN, Jassim WA. (2019). "A Fast Feature Extraction Algorithm for Image and Video Processing", The International Joint Conference on Neural Networks (IJCNN)
8. Lee G, Thar Baker. (2019). "Seamless Mobility Management in Heterogeneous 5G Networks: A Coordination Approach among Distributed SDN Controllers" IEEE Vehicular Technology Conference (VTC), Spring
9. Maamar Z, Ugljanin E, Thar Baker, Khafajiy MA, Faci N, Burégio V. (2019). "Towards a seamless coordination of cloud and fog", Proceedings of the ACM Symposium on Applied Computing, Part F147772 :2008-2015
10. de Arquer Rilo J, Hussain A, Al-Taei M, Thar Baker, Al-Jumeily D. (2019). "Dynamic Neural Network for Business and Market Analysis", Lecture

Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 11643 LNCS :77-87

11. Maamar Z, Thar Baker, Faci N, Ugljanin E, Al Khafajiy M, Burégio V. Towards a Seamless Coordination of Cloud and Fog: Illustration through the Internet-of-Things The 34th ACM/SIGAPP Symposium on Applied Computing (SAC (2019))
12. Alloghani M, Mustafina J, Al-Jumeily D, Hussain A, Thar Baker, Kaky A. (2018). "A Systematic Review on Application of Data Mining Techniques in Healthcare Analytics and Data-driven Decisions", 5th International Conference on Interactive Digital Media (ICIDM 2018), Springer,
13. Al-Khafajiy M, Thar Baker, Waraich A, Al-Jumeily D, Hussain A. (2018). "IoT-Fog Optimal Workload via Fog Offloading", 11th IEEE/ACM International Conference on Utility and Cloud Computing (UCC 2018).
14. Aljaaf A, Al-Jumeily D, Hussain A, Thar Baker, Khairallah T, Alloghani M. (2018). "H-Diary: Mobile application for headache diary and remote patient monitoring", The 11th International Conference on the Developments in eSystems Engineering (DeSE)
15. Mahyoub M, Randles M, Thar Baker, Yang P. (2018). "Comparison Analysis of Machine Learning Algorithms to Rank Alzheimer's Disease Risk Factors by Importance", Developments in E-systems Engineering (DeSE)
16. Mac Dermott AM, Thar Baker, Shi Q. (2018). "IoT Forensics: Challenges For The IoA Era", 9th IFIP International Conference on New Technologies Mobility and Security (NTMS) :1-5
17. Mohammed D, Lee GM, Thar Baker. (2018). "Applying Scheduling Mechanisms over 5G Cellular Network Packets Traffic", 3rd International Congress on Information and Communication Technology in concurrent with ICT Excellence Awards (ICICT 2018)
18. Al-Khafajiy M, Thar Baker, Al-Libawy H, Waraich A, Chalmers C, Alfandi O. (2018). "Fog Computing Framework for Internet of Things Applications", 11th international conference on Developments in eSystems Engineering (DESE 2018):71-77
19. Dighriri MHA, Alfoudi ASD, Lee G, Thar Baker. (2018), "Resource Allocation Scheme in 5G Network Slices", 32nd IEEE International Conference on Advanced Information Networking and Applications Workshops (AINAW).
20. Kaky A, Al-Jumeily D, Haglan H, Alloghani M, Thar Baker, Hussain A, Mustafina J. (2018), "Early Prediction of Chronic Kidney Disease Using Machine Learning Supported by Predictive Analytics", The bi-annual IEEE World Congress on Computational Intelligence (IEEE WCCI), 2018 IEEE Congress on Evolutionary Computation (CEC)
21. Amin A, Shah B, Asad K, Thar Baker, Durani H, Anwar S. (2018), "Just-in-time Customer Churn Prediction: With and Without Data Transformation", The bi-

- annual IEEE World Congress on Computational Intelligence (IEEE WCCI), 2018 IEEE Congress on Evolutionary Computation (CEC).
22. Maamar Z, Faci N, Boukadi K, Ugljanin E, Sallami M, Thar Baker. (2018), "How to Agentify the Internet-of-Things?", IEEE 12th International Conference on Research Challenges in Information Science (IEEE RCIS 2018)
 23. Faci N, Maamar Z, Thar Baker, Ugljanin E, Sellami M. (2018), "In Situ Mutation for Active Things in the IoT Context", the 13th International Conference on Software Technologies (ICSOFIT 2018)
 24. Al-Khafajiy M, Webster L, Thar Baker, Waraich A. (2018), "Towards Fog Driven IoT Healthcare: Challenges and Framework of Fog Computing in Healthcare", ACM International Conference on Future Networks and Distributed Systems (ICFNDS).
 25. Mahyoub M, Randles M, Thar Baker, Yang P. (2018), "Effective Use of Data Science Toward Early Prediction of Alzheimer's Disease", The 16th IEEE International Conference on Smart City (SmartCity-2018).
 26. Thar Baker, García-Campos JM, Gutiérrez Reina D, Toral S, Tawfik H, Al-Jumeily D, Hussain A. (2018), "GreeAODV: An Energy Efficient Routing Protocol for Vehicular Ad Hoc Networks", IEEE International Conference on Intelligent Computing (ICIC 2018).
 27. Maamar Z, Thar Baker, Faci N, Ugljanin E, Atif Y, Al-Khafajiy M, Sellami M. (2018), "Cognitive Computing Meets the Internet of Things", 13th International Conference on Software Technologies (ICSOFIT 2018).
 28. Maamar Z, Boukadi K, Ugljanin E, Thar Baker, Asim M, Al-Khafajiy M, Benslimane D. (2018), "Thing Federation as a Service: Foundations and Demonstration", Lecture Notes in Computer Science (LNCS) by Springer-Verlag., 8th International Conference on Model and Data Engineering (MEDI 2018)
 29. Alloghani M, Al-Jumeily D, Thar Baker, Hussain A, Mustafina J, Kaky AJM. (2018), "Applications of Machine learning Techniques for Software Engineering Learning and Early Prediction of Students' Performance", Communications in Computer and Information Science (CCIS) series, 4th International Conference on Soft Computing in Data Science 2018 (SCDS2018)
 30. Khalaf M, Hussain A, Al-Jumeily D, Thar Baker, Keight R, Lisboa P, Alkafri A, Fergus P. (2018), "A Data Science Methodology Based on Machine Learning Algorithms for Flood Severity Prediction", The bi-annual IEEE World Congress on Computational Intelligence (IEEE WCCI), 2018 IEEE Congress on Evolutionary Computation (CEC)
 31. Alshabandar R, Hussain A, Keight R, Laws A, Lunn J, Thar Baker. (2018), "The Application of Gaussian Mixture Models for the Identification of At-Risk Learners in Massive Open Online Courses", The bi-annual IEEE World Congress on Computational Intelligence (IEEE WCCI), 2018 IEEE Congress on Evolutionary Computation (CEC)

32. Hussain A, Marcinonyte D, Iqbal F, Tawfik H, Thar Baker, Al-Jumeily D. (2018), "Smart Home Systems Security", IEEE Xplore, The 16th IEEE International Conference on Smart City (SmartCity-2018)
33. Abbas R, Hussain A, Al-Jumeily D, Thar Baker, Khattak A. (2018), "Classification of Foetal Distress and Hypoxia using Machine Learning Approaches", 2018 International Conference on Intelligent Computing (ICIC 2018), pp 767-776
34. Alsadhan A, Hussain A, Alfandi O, Thar Baker. (2018), "Detecting Distributed Denial of Service Attacks in Neighbour Discovery Protocol Using Machine Learning Algorithm Based on Streams Representation", International Conference on Intelligent Computing (ICIC 2018), pp 551 - 563
35. Thar Baker, Hanneghan M, Hussien A, Housden A, Duffy L, Kot P. (2018), "viducation: animated videos for cloud computing", 11th annual International Conference of Education, Research and Innovation.
36. Thar Baker, Hussien A, Randles M, Taleb-Bendiab A. (2017), "Supporting Elastic Cloud Computation with Intention Description Language", The 11th Annual Conference on the Convergence of Telecommunications, Networking & Broadcasting
37. Maamar Z, Thar Baker, Faci N, Ugljanin E, Atif Y, Al-Khafajiy M, Sellami M. (2017), "Cognitive Computing Meets the Internet of Things", Proceedings of the 13th International Conference on Software Technologies
38. Fahim M, Thar Baker, Khattak A, Alfandi O. (2017), "Alert Me: Enhancing Active Lifestyle Via Observing Sedentary Behavior Using Mobile Sensing Systems", 19th IEEE International Conference on e-Health Networking, Applications and Services (IEEE Healthcom)
39. Thar Baker, Hussien A, Hanneghan M, Faci N. (2017), "Game-based Learning in a Real-Life Business Context Using Didactic Mash-up Concepts", the 10th annual International Conference of Education, Research and Innovation (iCERI 2017)
40. Dighriri M, Lee G, Thar Baker. (2017), "Resource Allocation Scheme in 5G Network Slices", 2017 International Conference on Radar, Antenna, Microwave, Electronics and Telecommunications (2017 ICRAMET)
41. Dighriri M, Alfoudi A, Lee GM, Thar Baker, Pereira R. (2017), "Comparison Data Traffic Scheduling Techniques for Classifying QoS over 5G Mobile Networks", The 31st IEEE International Conference on Advanced Information Networking and Applications (AINA-2017)
42. Al Sharif S, Iqbal F, Thar Baker, Marrington A. (2016), "Magec: An Image Searching Tool for Detecting Forged Images in Forensic Investigation", 1st IFIP NTMS International Workshop on Cybercrime Investigation and Digital forensics (CID) in Conjunction with the 8th IFIP International Conference on New Technologies, Mobility and Security (NTMS)

43. Al Sharif S, Iqbal F, Thar Baker, Khattak A. (2016), "White-hat Hacking Framework for Promoting Security Awareness", 1st IFIP NTMS International Workshop on Cybercrime Investigation and Digital forensics (CID) in Conjunction with the 8th IFIP International Conference on New Technologies, Mobility and Security (NTMS)
44. Dighriri M, Alfoudi A, Lee G, Thar Baker. (2016), "Data Traffic Model in Machine to Machine Communications Over 5G Network Slicing", 9th International Conference on Developments in e-Systems Engineering (DeSE2016)
45. Hamdi D, Iqbal F, Thar Baker, Shah B. (2016), "Multimedia File Signature Analysis for Smartphone Forensics", Developments in eSystems Engineering (DeSE2016)
46. Dighriri M, Alfoudi A, Lee GM, Thar Baker. (2016), "Data Traffic Model in Machine to Machine Communications over 5G Network Slicing" Developments in eSystems Engineering (DeSE2016)
47. Fahim M, Khattak A, Thar Baker, Chow F, Shah B. (2016), "Micro-context Recognition of Sedentary Behaviour Using Smartphone", The 6th International Conference on Digital Information & Communication Technology and Its Applications
48. Aldawsari B, Thar Baker, England D. (2015), "Towards a holistic brokerage system for multi-cloud environment", 2015 10th International Conference for Internet Technology and Secured Transactions, ICITST 2015, :249-255
49. Thar Baker, Mackay M, Shaheed A, Aldawsari B. (2015), "Security-Oriented Cloud Platform for SOA-based SCADA", 15th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid), :961-970
50. Aldawsari B, Thar Baker, England D. (2015), "Towards a Holistic Multi-Cloud Brokerage System: Taxonomy, Survey and Future Directions", Wu YL, Min GY, Georgalas N, Hu J, Atzori L, Jin XL, Jarvis S, Liu L, Calvo RA. cit/iucc/dasc/picom 2015 iee international conference on computer and information technology - ubiquitous computing and communications - dependable, autonomic and secure computing - pervasive intelligence and computing, IEEE International Conference on Computer and Information :1468-1473
51. Aldawsari B, Thar Baker, England D. (2015), "Towards a Holistic Brokerage System for Multi-Cloud Environment", 2015 10th international conference for internet technology and secured transactions (ICITST), :248-254
52. Thar Baker, Ngoko Y, Tolosana-Calasanz R, Rana OF, Randles M. (2013), "Energy Efficient Cloud Computing Environment Via Autonomic Meta-Director Framework", 6th International Conference on Developments in eSystems Engineering (DeSE) :198-203
53. Thar Baker, Rana OF, Calinescu R, Tolosana-Calasanz R, Bañares JA. (2013), "Towards autonomic cloud services engineering via intention workflow model", Lecture Notes in Computer Science (including subseries Lecture Notes

in Artificial Intelligence and Lecture Notes in Bioinformatics), 8193 LNCS :212-227

54. Karam Y, Thar Baker, Taleb-Bendiab A. (2013), "Support for Self-Optimized Organizational Patterns in Socio-Driven Elastic Clouds", 7th IEEE International Systems Conference (SysCon).
55. Karam Y, Thar Baker, Bendiab AT. (2013), "Support for Intention Driven Cloud Government Entitlement Services", 2013 International Conference on Computer Applications Technology (ICCAT)
56. Karam Y, Thar Baker, Taleb-Bendiab A. (2013), "Intention-Oriented Modelling Support for GORE in Elastic Cloud Application",s international conference on computer medical applications (ICCMa' 2013)
57. Karam Y, Thar Baker, Bendiab AT. (2013), "Oblivious Clouds: Towards Self-Conscious Cloud based Application Development", 4th international conference on intelligent systems, modelling and simulation (ISMS 2013):105-111
58. Thar Baker, Taleb-Bendiab A, Randles M, Hussien A. (2012), "Understanding Elasticity of Cloud Services Compositions", The 5th IEEE/ACM International Conference on Utility and Cloud Computing (UCC2012)
59. Thar Baker, Randles M, Taleb-Bendiab A. (2012), "Towards the automated engineering of dependable adaptive services", 12th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, (CCGrid 2012), :823-828
60. Karam Y, Thar Baker, Taleb-Bendiab A. (2012), "Intention-oriented modelling support for socio-technical driven elastic cloud applications", 2012 International Conference on Innovations in Information Technology, IIT 2012, :42-47
61. Thar Baker, Taleb-Bendiab A, Randles M, Hussien A. (2012), "Understanding Elasticity of Cloud Services Compositions", 5th IEEE/ACM International Conference on Utility and Cloud Computing (UCC) :231
62. Karam Y, Thar Baker, Taleb-Bendiab A. (2012), "Security Support for Intention Driven Elastic Cloud Computing", 6th UKSim/AMSS European Symposium on Computer Modelling and Simulation (EMS)
63. Thar Baker, Mackay M, Randles M. (2011), "Eternal cloud computation application development", 4th International Conference on Developments in eSystems Engineering, DeSE 2011, :392-397
64. Thar Baker, Lamb D, Taleb-Bendiab A, Al-Jumeily D. (2010), "Facilitating semantic adaptation of web services at runtime using a meta-data layer", 3rd International Conference on Developments in eSystems Engineering, DeSE 2010, :231-236
65. Thar Baker, Taleb-Bendiab A, Randles M, Karam Y. (2010), "Support for Adaptive Cloud-Based Applications via Intention Modelling", The 3rd International Symposium on Web Services

66. Thar Baker, Bendiab AT, Al-Jumeily D. (2010), "Assurance Support for full Adaptive Service Based Applications", 12th International Conference on Computer Modelling and Simulation (UKSim) :179-185
67. Thar Baker, Taleb-Bendiab A, Randles M. (2009), "Auditable Intention-Oriented Web Applications using PAA", Auditing/Accounting Paradigm Techniques and Applications for Mobile Commerce (TAMoCo 2009)
68. Thar Baker, Taleb-Bendiab A, Al-Jumeily D. (2009), "Process-Oriented e-Government Application Development", 11th International Conference on Computer Modelling and Simulation (UKSim 2009) :628-633
69. Thar Baker, Taleb-Bendiab A, Al-Jumeily D, Miseldine P. (2009), "Creating On-Demand Service-Oriented Applications from Intentions Model", 2nd International Conference on Developments in eSystems Engineering :219-226
70. Thar Baker, Taleb-Bendiab A, Randles M. (2009), "Auditable intention-oriented web applications using PAA", auditing/accounting paradigm Frontiers in Artificial Intelligence and Applications, 201 :61-70
71. Thar Baker, Taleb-Bendiab A, Randles M. (2008), "Support for M-Commerce Software Autonomy", International Conference on Techniques and Applications for Mobile Commerce (TAMoCo 2008) 169 :165-176
72. Taleb-Bendiab A, Miseldine P, Randles M, Thar Baker. (2008), "Programming support and governance for process-oriented software autonomy", 3rd International Conference on Web Information Systems and Technologies 8 :3-18
73. Thar Baker, Randles MJ, Taleb-Bendiab A. Towards the Automated Engineering of Dependable Adaptive Services 12th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid) N/A :823-828

Book Chapters

1. Mohammed Al-khafajiy, Thar Baker, Aseel Hussien, Alison Cotgrave, (2020), "UAV and Fog Computing for IoE-based Systems: A Case Study on Environment Disaster Prediction and Recovery Plans", accepted, to appear in Unmanned Aerial Vehicles in Smart Cities, Springer.
2. Alloghani M, Thar Baker, Al-Jumeily D, Hussain A, Mustafina J, Aljaaf AJ. (2020), "Prospects of machine and deep learning in analysis of vital signs for the improvement of healthcare services", Studies in Computational Intelligence 855 :113-136
3. Alloghani M, Al-Jumeily D, Hussain A, Mustafina J, Thar Baker, Aljaaf AJ. (2020), "Implementation of machine learning and data mining to improve cybersecurity and limit vulnerabilities to cyber-attacks", Studies in Computational Intelligence 855 :47-76
4. Dighriri M, Lee GM, Thar Baker. (2018), "Measurement and Classification of Smart Systems Data Traffic Over 5G Mobile Networks", Technology for Smart Futures Springer International Publishing.

5. Dighriri M, Lee G, Thar Baker. (2018), “Big Data Environment for Smart Healthcare Applications Over 5G Mobile Network”, Applications of Big Data Analytics Springer International Publishing AG
6. Alloghani M, Thar Baker, Al-Jumeily D, Hussain A, Kaky A, Mustafina J. (2018), “Early Detection and Prediction of Lung Cancer using Machine Learning Algorithms Applied on a Secure Healthcare Data System Architecture Machine Learning for Computer and Cyber Security: Principles, Algorithms, and Practices Taylor and Francis Group LLC (T&F)
7. Lee GM, Thar Baker. (2017), “Measuring and Classification of Smart Systems Data Traffic Over 5G Mobile Networks”, Technology and Smart Futures Springer
8. Fahim M, Thar Baker. (2017), “Knowledge-based Decision Support Systems for Personalized u-lifecare Big Data Services”, Current Trends on Knowledge-Based Systems: Theory and Applications, Springer
9. Kifayat K, Thar Baker, Mackay MI, shi Q, Merabti M. (2013), “Real Time Risk Management in Cloud Computation”, Security Engineering for Cloud Computing: Approaches and Tools

Journal Editorships

- | | |
|----------------|---|
| 2016 – present | Associate Editor, Future Generation Computer Systems (FGCS), Elsevier. |
| 2017 – present | Associate Editor, Journal of Network and Computer Applications (JNCA), Elsevier. |
| 2019 | Lead Guest Editor, Journal of Sustainable Cities and Society (SCS), Elsevier. SI title: Enabling Technologies and Tools for Next Generation Internet Security |
| 2019 – present | Lead Guest Editor, Journal of Parallel and Distributed Computing (JPDC), Elsevier. SI title: Special issue on Enabling Technologies for Energy Cloud |
| 2019 – present | Lead Guest Editor, Software: Practice and Experience (SPE), Wiley. SI title: Semantic eSystems: Engineering Methods, Techniques and Tools |
| 2019 – present | Lead Guest Editor, Transaction on Emerging Telecommunications Technologies (ETT), Wiley. SI title: Enabling AI Technologies for Internet of Energy |
| 2019 | Guest Editor, Internet Technology Letter (ITL), Wiley. SI title: Leveraging Advanced Technologies and Tools for Connected Vehicles: Challenges and Future Trends. |

- 2017 – present Advisory Editor of International Journal of Cloud Applications and Computing (IJCAC), IGI Global.
- 2015 – present Associate Editor of International Journal of Information Technology and Web Engineering (IJITWE), IGI Global.
- 2015 – present Editorial Board Member of International Journal on AdHoc Networking Systems (IJANS), AIRCC.
- 2011 – present Associate Editor, International Journal of Cloud Computing & Services Science (IJ-CLOSER).

Journal Reviews (Last updated: January 2020)

(More than 60 journals verified by Publons, selection below)

Program Committee Memberships and Chair

(More than 50 TPCs, selection below)

- 2019 16th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA 2019), November 3rd - 7th, 2019, Abu Dhabi, UAE. (Track chair: High Performance Computing)
- 2019 The IEEE Congress on Evolutionary Computation (IEEE CEC), June 10th – 13th, 2019, Wellington, New Zealand. (Special session Chair: Evolutionary Computation for Sensors and UAV Applications)
- 2018 International Conference on Energy Engineering and Smart Grids (SEG'18), June 4 - 5, Oxford, UK.
- 2018 The 6th EuroMicro PDP Special Session on Cloud Computing on Infrastructure as a Service and Its Applications (CCISA 2018), March 21-23, Cambridge, UK.
- 2018 Cybercrime investigation and digital forensics workshop (CID 2018). (TPC member)
- 2018 The 7th International Conference on Educational and Information Technology (ICEIT 2018), March 7-9, Oxford, UK.
- 2017 The Second International Conference on Cyber-Technologies and Cyber-Systems (CYBER 2017), November 12-16, Barcelona, Spain.
- 2017 The 1st EAI International Conference on Emerging Technologies for Developing Countries, Demos Chair, March 27-29, Marrakech, Morocco.

- 2017 The 6th International Conference on Educational and Information Technology (ICEIT 2017), TPC member, March 7-10, Cambridge, UK.
- 2017 The 10th IEEE International Conference on Internet of Things (iThings-2017), TPC member, June 21-23, Exeter, UK.
- 2016 The 9th International Conference on the Developments on eSystems Engineering (DeSE 2016), Track Chair, 31 Aug - 2 September, Liverpool/Leeds, UK.
- 2015 The IEEE International Conference on Internet of People (IoP2015) China,
- 2015 The 15th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid'15), China.
- 2014 The 2nd International Conference on Future Internet of Things and Cloud (FiCloud-2014), Track 12: Green Cloud and IoT, 27-29 August 2014, Barcelona, Spain
- 2014 2014 International Conference on Networks and Wireless Technology and Applications (ICNwTA 2014), 22-24 March 2014, Hammamet, Tunisia
- 2014 2014 6th International Conference on Digital Processing (ICDIP 2014), 05-06 April 2014, Athens, Greece
- 2013 2013 International Conference on Mobile Applications and Security Management (ICMASM'2013), June 22-24, Sousse, Tunisia.
- 2013 The 6th IEEE/ACM International Conference on Utility and Cloud Computing (UCC2013), December 2-5, 2013, Dresden, Germany.
- 2013 The 6th International Conference on Development in eSystems Engineering (DeSE 2013), Track Chair and TPC member: Track 2 eGovernment Systems, Autonomic Computing and AI. 16-18 December, Abu Dhabi, UAE
- 2013 Second International Workshop on Cloud Computing and Identity Management (CLOUDID 2013), August 22-25, 2013, Mysore, India.
- 2013 3rd IEEE International Symposium on Trust and Security in Cloud Computing, Part of IEEE TrustCom-13 (IEEE TSCloud 2013), Melbourne, Australia.

- 2013 The 14th Annual Post Graduate Symposium on the Governance of Telecommunications, Networking and Broadcasting (PGNet2013), 24-25 June 2013, Liverpool, UK.
- 2013 2013 International Conference on Communication System and Network Technologies (CSNT 2013), April 5-8, Gwalior, India.
- 2012 The 5th IEEE/ACM Conference on Utility and Cloud Computing (UCC2012), November 5-8, 2012, Chicago, Illinois, USA.
- 2012 The 2012 IEEE Conference on Control, Systems & Industrial Informatics (ICCSII 2012). TPC.
- 2012 2nd International Workshop on Cloud Computing and Scientific Applications (CCSA), in conjunction with the 12th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid 2012). PCM.
- 2012 The 2012 International Conference on High Performance Computing & Simulation (HPCS 2012), in cooperation with the ACM, IEEE, IFIP, Madrid, Spain, Technical PCM.
- 2012 2nd IEEE International Symposium on Trust and Security in Cloud Computing, Part of IEEE TrustCom-12 (IEEE TSCloud 2012), Liverpool, UK. Technical PCM.
- 2012 The 5th IEEE International Conference on "Development in e-Systems Engineering" (DeSE12) 2012, International PC member + Track Chair.
- 2012 International Conference on Communication Systems and Network Technologies (CSNT2012), PC Member.
- 2012 IEEE International Conference on Computational Intelligence and Communication Networks (CICN2012), PC Member.
- 2011 International Conference on Communication Systems and Network Technologies (CSNT2011), PC Member.
- 2011 IEEE International Conference on Computational Intelligence and Communication Networks (CICN2011), PC Member.
- 2011 The Forth IEEE International Conference on "Development in e-Systems Engineering" (DeSE11) 2011, Dubai, UAE. International PC member.

International Presentation and Keynotes

(More than 30 presentations and 10 keynotes, selection below)

- 2019 A Holistic Study on Emerging IoT Networking Paradigms Developments in eSystems Engineering (DeSE), Kazan, Russia
- 2019 Data Loss Prevention and Storage Utilization Improvement of the Hidden Volume on Mobile Devices, IEEE, Symposium on Computers and Communications (ISCC), Barcelona, Spain
- 2019 Improving Resiliency of Software-Defined Networks with Network Coding-based Multipath Routing IEEE, Symposium on Computers and Communications (ISCC), Barcelona, Spain
- 2019 Enabling High Performance Fog Computing through fog-2-fog Coordination Model 16th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA 2019), Abu Dhabi, UAE
- 2019 A Fast Feature Extraction Algorithm for Image and Video Processing, The International Joint Conference on Neural Networks (IJCNN), Hungary
- 2018 IoT-Fog Optimal Workload via Fog Offloading, 11th IEEE/ACM International Conference on Utility and Cloud Computing, Austria
- 2018 Delivered a keynote speech at the 2nd International Conference on Future Networks and Distributed Systems, Amman, Jordan, 2018; Title: Next Generation Internet: Services and Challenges.
- 2018 Energy Efficient Routing for Cloud Computing, International Conference on Future Networks and Distributed Systems, Amman, Jordan
- 2018 Next Generation Community Network, Fraunhofer, Berlin, Germany.
- 2017 Game-based Learning in a Real-Life Business Context Using Didactic Mash-up Concepts 10th annual International Conference of Education, Research and Innovation (iCERI 2017), Seville, Spain
- 2017 Just-in-time Customer Churn Prediction: With and Without Data Transformation The bi-annual IEEE World Congress on Computational Intelligence (IEEE WCCI), 2018 IEEE Congress on Evolutionary Computation (CEC), Brazil
- 2015 Security-Oriented Cloud Platform for SOA-based SCADA 15th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid), Shenzhen, China.

- 2014 Delivered a keynote speech at the 2014 Symposium on Service-Oriented Next Generation Networks (SONET – 2014), Liverpool, UK, 2014; Title: Energy Efficient Cloud Computing Environment Via GreeDi Routing Algorithm.
- 2012 Delivered a keynote speech the 2nd International Workshop on Recent Advances in Networking, Security and Forensics, University of Bedfordshire, Bedfordshire, UK, 2012; Title: Security-oriented Critical Cloud Computing Infrastructure.
- 2012 Towards the automated engineering of dependable adaptive services Proceedings - 12th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, CCGrid, Ottawa, Canada

Successful PhD Supervision

- 2016 – present Dr Ruqaya Al-Ani, A Safety-related Privacy Scheme for Vehicular Ad hoc Networks
- 2017 – 2020 Dr Mohammed Al-Khafajiy, Thesis title: Ad-hoc Fog Framework for Internet of Things Applications
- 2016 – 2019 Dr Mohammed Mahyoub, Thesis title: Data Science for Early Prediction of Alzheimer
- 2016 – 2019 Dr Mohammed Dighriri, Thesis title: Data Traffic Models in M2M 5G-based Network
- 2015 – 2018 Dr Mohammed Khalaf, Thesis title: Machine Learning for the Application of Disease Modifying Therapy for Sickle Cell
- 2015 – 2018 Dr Ali Alfoudi, Thesis title: Slicing-based Resource Allocation for Emerging Wireless Networks
- 2014 – 2017 Dr Bandar Aldawsari, Thesis title: Energy Efficient Multi-Cloud Service Broker for Cloud Computing

Current PhD Supervision

- 2017 – present Mr Ali Al-Qarni, thesis title: Contributions to SLA Negotiation and Monitoring in Cloud Computing
- 2018 – present Mr Fares Yousefi, thesis title: A new biometric authentication method using brain signals
- 2019 - present Mr Salah Ben Amer, thesis title: Intelligent web crawlers-based framework for predicting illegal migration across the central Mediterranean Sea into Europe

- 2019 – present Mr Meshal Albeedan, thesis title: HoloLens: Crime Scene Investigations through Augmented Reality
- 2019 – present Ms Shatha Ghareeb, thesis title: A Distributed Machine Learning Based Framework for Students' Educational Levelling in Multicultural Countries: UAE as a Case Study
- 2019 – present Mr Rawaa Al-jumeily, thesis title: Developing a Humanoid Robot-support Automated Framework to Advance the Quality of Education in Multicultural Education Systems: UAE Case Study
- 2019 – present Mr Ahmed Alanezi, thesis title: Intelligent Cloud-Based Web Crawlers to Enhance Community Protection and Security
- 2019 – present Mr Rahat Ullah, thesis title: Real Time Mobility Assistance and Auditory Display System for Visually Impaired People Using Heterogeneous Data Processing

Masters by Research Supervision

(More than 15 completed, selection below)

- 2018 – 2019 Mr Maj Alshibly, thesis title: A Multi-Criteria Decision-Making Approach for Cloud and Fog Coordination & Transactional Properties
- 2018 – 2019 Mr Hezekiah Yeng Samwini, thesis title: A Fog-based IoMT framework for Smart Public Vehicular Transportation Systems
- 2017 – 2018 Mr Mateusz Szymanski, thesis title: Security Investigation of Cloud-Connected Sensors for Smart Healthcare
- 2017 – 2018 Mr Lee Webster, thesis title: Latency-Sensitive Fog Computing Investigation within a Healthcare Scenario
- 2015 – 2016 Mr Mohammed Al-Khafajiy, thesis title: Cloud-connected Sensors for Smart Healthcare
- 2014 – 2015 Mr Mohammed Dgahriri, thesis title: Financial Impact Analysis of Cloud Computing Infrastructure on Very-Big Companies
- 2013 – 2014 Mr Bandar Aldawsari, thesis title: Energy Efficient User's Task Routing Model for Green Cloud Computation
- 2011 – 2012 Mr Usman Hamza, thesis title: Design and Development of New Cloud-Based Applications Development Methodology
- 2009 – 2010 Mr Mr. Keattikun Noisuwan, thesis title: OWL-ontology for Community-based Web

External PhD Viva Examination

- 2019 Dr Nabil Hadj-Admed, PhD, Leeds Beckett University, UK. Thesis title: Data Centre Energy Efficiency using Dynamic Resource Allocation
- 2019 Dr Amzari Ghazali, PhD, University of Liverpool, UK. Thesis title: High Performance, Secured VoIP Based on Enhanced Blowfish Encryption Algorithm
- 2018 Dr Basil Alothman, PhD, De Montfort University, UK. Thesis title: Robust Botnet Detection Techniques for Mobile and Network Environments
- 2013 Mr Tameem Chowdhury, MPhil, University of South Wales, UK
- 2012 Mr Tariq Alsbouy, MPhil, Manchester Met. University, UK
- 2011 Ms Fiona Buckingham, MPhil, Manchester Met. University, UK

Internal PhD/MPhil Viva Examination

- 2020 Dr Hanaa Nafea, PhD thesis title: A Novel component-based framework for data leakage detection
- 2020 Fares Yousefi, MPhil thesis title: Brain Signal as a New Biometric Authentication Method
- 2019 Dr Ala Sami Al-Kafri, PhD thesis title: A Machine Learning Approach to Computer Assisted Diagnosis of Chronic Lower Back Pain on Lumbar Spine Magnetic Resonance Images
- 2019 Dr Jade Hind, PhD thesis title: A novel approach to detecting epistasis using random sampling regularisation
- 2019 Dr Ruqayah Al-Dahhan, PhD thesis title: Efficient Ciphertext-policy Attribute Based Encryption for Cloud-Based Access Control
- 2019 Dr Mohamed Alloghani, PhD thesis title: An Oriented Citizen-Centric Model with a Practical Implementation of Intelligent Systems Approach for the E-Governance: A UAE Case Study
- 2019 Dr Suparawadee Trongtortam, PhD thesis title: a decision support model for mobile technology enhanced teaching
- 2018 Dr Sarmad Abdulazeez, PhD thesis title: Dynamic Load Balancing for Massively Multiplayer Online Games
- 2018 Dr Nguyen Binh Truong, PhD thesis title: trust in the internet of things: concept, model and evaluation mechanisms

- 2018 Dr Akeel Thulnoon, PhD thesis title: Efficient Runtime Security System for Decentralised Distributed Systems
- 2018 Dr Raghad A-Shabandar, PhD thesis title: The Application of Machine Learning for Early Detection of at-Risk Learners in Massive Open Online Courses
- 2018 Mrs Rounaq Abbas, MPhil thesis title: Classification of Foetal Distress and Hypoxia Using Machine Learning
- 2017 Dr Ahmed Kaky, PhD thesis title: Intelligent Mobile Application System to Diagnose and Manage Patients with Headache
- 2016 Mr Casimiro Aday Curbelo Montanez, MPhil thesis title: Intelligent System for the Prediction of Obesity Susceptibility in Humans Using Genetic Variants

International PhD Viva Examination

- 2019 Dr Mr. Yasir Noman Khalid, Capital University of Science and Technology, Islamabad, Pakistan
- 2019 Dr Altaf Hussain, Capital University of Science and Technology, Islamabad, Pakistan
- 2019 Dr Alamgir Naushad, GIK Institute of Engineering Science and Technology, Pakistan
- 2018 Dr Getzi Jeba Leelipushpam, Karunya Institute of Technology and Science, India
- 2018 Dr Syed Rahman Mashwani, University of Peshawar, Pakistan
- 2017 Dr Shaukat Ali, University of Peshawar, Pakistan

Teaching

- 2016 – present Module Leader: Problem Solving for Multimedia Computing (L4), Lecture and Tutorial, Liverpool John Moores University
- 2016 – present Module Leader: Problem Solving for Data Science (L4), Lecture and Tutorial, Liverpool John Moores University
- 2013 – present Module Leader: Advanced Web Development (L5), Lecture and Tutorial, Liverpool John Moores University
- 2013 – present Lab Support: Introduction to Programming (L4), exercises, Liverpool John Moores University

- 2013 – present Lab Support: Database Systems (L5), exercises, Liverpool John Moores University
- 2013 – 2018 Module Leader: Green and Sustainable Computing (L6), Lecture and Tutorial, Liverpool John Moores University
- 2014 – 2016 Module Leader: Cloud Computing (L6), Lecture and Tutorial, Liverpool John Moores University
- 2013 – 2015 Lab Support: Web Design and HCI (L4), exercises, Liverpool John Moores University
- 2013 – 2015 Module Leader: Interactive Media and Games Development (L4), Lecture and Tutorial, Liverpool John Moores University
- 2014 – 2017 Lab Support: Internet and Web Technologies (L4), exercises, Liverpool John Moores University
- 2012 – 2013 Web and Multimedia Computing, (MSc Level), Manchester Metropolitan University
- 2012 – 2013 Human Computer Interaction (L6), Manchester Metropolitan University
- 2012 – 2013 Advanced Web Programming (L5), Manchester Metropolitan University
- 2011 – 2012 Professional Development (L5), Manchester Metropolitan University
- 2011 – 2012 Information Systems (L4), Manchester Metropolitan University
- 2011 – 2012 Introduction to Computing (Foundation level), Manchester Metropolitan University

External Examining: Academic Programmes

- 2017 – present Kingston University London – School of Computer Science, programmes are: (1) BSc Cyber Security and Computer Forensics (2) Information Systems; (3) MSc in IT and Strategic Innovation; (4) MSc in Software Engineering; (5) MSc in International Enterprise Information Management with HNU in Germany.
- 2019 – present De Montfort University, School of Computer Science and Informatics; programmes are: MSc in Software Engineering, and Cyber Security.
- 2018 – present Sheffield Hallam University – Department of Computing, programmes are: BEng/MEng in Software Engineering.

- 2018 – present University of Greenwich – School of Computing and Mathematical Sciences; programmes are: BSc (Hons) Computing, Business Computing, Computer Science, Business Information Technology, Computing and Information Systems, Computer Security and Networking at collaborative centres.
- 2018 – 2019 Hong Kong University SPACE, External Assessor, MSc Cyber Security Programme.

External Examining: Professional Programmes

- 2017 – present British Computer Society (BCS), External Examiner of Web Engineering Programme.
- 2017 – present British Computer Society (BCS), The Professional Examination Board (PEB) for Certificate, Diploma, and Professional Graduate Diploma in Computer Science.
- 2017 – present British Computer Society (BCS), The Higher Education Qualifications (HEQ) Validation and Approval Panel.

Research Funding Programs

- 2019 – present Expert evaluator of The UK National Commission for UNESCO research projects
- 2017 – present Expert Evaluator of EU H2020 Next Generation Internet (NGI),
- 2016 – present Expert Assessor of British Council (BC) and Newton funds of Institutional Links and Research Workshops grants
- 2016 – present Expert Assessor of UAE ICTFund projects
- 2012 – 2015 Expert Evaluator in the Future Internet Research and Experimentation (FIRE) at the European 7th Framework Programme (EU-FP7 CONFINE).

Awards

- 2017 British Council Travel Award, Newton Bhabha Travel to India. £5k
- 2017 – 2018 LJMU Vice Chancellor's Individual Best Teaching Award
- 2018 – 2019 Best Paper Award in the 5th ICIDM conference, Springer.
- 2010 – present Outstanding Reviewer Award by 10 Elsevier journals

2017 – present Listed in the Top 1% in Field of Computer Science articles' reviewers by Publons for 2017-2018. I am a reviewer of more than 60 international peer-review journals

2012 - 2013 Best Overall Teacher Award, Manchester Metropolitan University

Professional Memberships

2018 – present Senior Fellow of HEA (SFHEA)

2016 – present Member of the iLM (MiLM)

2011 – present Member of IEEE (MIEEE)

2010 – present Member of British Computer Society (MBCS)