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Dr Mashaal Sulaiman Maashi, Ph.D.

Profile Summary

- + 16 years of Experience in Computer Science and Artificial Intelligence.
- +60 Published research papers in journals with high-impact factor.
- +50 Membership in TPC conferences, Editorial Journal Board.
- +250 reviews for the research papers in high-ranking journals
- + 15 Projects in Artificial Intelligence and Software Engineering
- +15 Speech and workshops are presented in Computer Science and scientific research.
- +23 Taught courses in Computer Sciences and Software Engineering
- +1500 citations on the Published research papers

Citizenship Saudi Arabian

Education

Ph.D. Computer Science, University of Nottingham, England, United Kingdom, 2014.

M.Sc. Technology for Teaching and Learning, University of Glamorgan (formed the University of South Wales) , United Kingdom, 2009.

BSc. Computer Science, Department of Computer Science, Faculty of Science, King Abdulaziz University, Jeddah, Saudi Arabia.2005.

Administrative Experience

Director, Research Center at Collage of Computer and Information Sciences, Deanship of Scientific Research, King Saud University. 2020- until now.

Secretary, Research Center Council at Collage of Computer and Information Sciences, Deanship of Scientific Research, King Saud University s. 2020- until now.

Board Member , Science, Technology & Engineering Innovation Unit (STEM), Entrepreneurship Institute, King Saud University,2021- till now

Head, Public Relation and Media Unit - Collage of Computer and Information Sciences, King Saud University. 2020

Head, Community Relation Unit - Collage of Computer and Information Sciences, King Saud University s. 2019- 2020.

Chairman, CCIS Media Committee, KSU Female Campus, King Saud University. 2021

Chairman, Digital Content Committee, - Collage of Computer and Information Sciences, King Saud University. 2021.

Chairman, Committee of Community Service - Collage of Computer and Information, Female Section, King Saud University sciences. 2017- 2019.

IT Specialist, IT Services Unit, Khadijah bint Khuwailid Center(KBK), Jeddah Chamber of Commerce & Industry (JCCI), Jeddah, Saudi Arabia. From 2005 – 2006.

Academia Experience

Associate Professor

Department of Software Engineering, College of Computer & Information Sciences, King Saud University, From September 2022 to until now

Assistant Professor

Department of Software Engineering, College of Computer & Information Sciences, King Saud University, From September 2017 to September 2022

Assistant Professor (Part-time)

Department of Computer Engineering, College of Engineering and Architecture, Al Yamamh University,2019.

Assistant Professor

Department of Computer Science, College of Computer & Information Technology, Tabuk University, From 2014 to September 2017.

Teaching Assistant

Department of Computer Science, College of Computer & Information Technology, Tabuk University, From 2006 to 2014.

Lab Demonstrator

School of Computer Science, University of Nottingham, England, United Kingdom, 2012.

Instructor

Computer Science Instructor at Tabuk Health Collage for Girls, Ministry of Health, Tabuk, Saudi Arabia. From 2006 to 2006.

Research Interests

Intelligent computing, artificial intelligence, generative artificial intelligence, machine learning, hyper-heuristic, meta-heuristics, multi-objective optimization, evolutionary algorithms, classification, software optimization, search-based software engineering, and bioinformatics.

Research Profile

- *Web of Science ID*: AAJ-3501-2020
- *ORCID*: 0003-0446-5430
- *Scopus ID*: 57216199758
- *Scholar ID*: Gol9xPcAAAAJ&hl
- *H-index* 17
- *I10-index* 21

Project Funded

1. Research supporting by the Deputyship for Research and Innovation, Ministry of Education in Saudi Arabia for funding this research work through the project no. (IFKSUOR3–169).
2. Research supporting by the King Salman center for Disability Research through Research Group no KSRG-2023-175.
3. Research Supporting Project number (RSPD2023R787), King Saud University, Riyadh, Saudi Arabia.
4. Research supporting by the Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia for funding this research work through the project no. (IFKSURG-1723).
5. Research supporting by the Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia for funding this research work through the project no. (IFKSURG-1724).
6. Research supporting by the Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia for funding this research work through the project no. (IFKSURG-1741).
7. Research supporting by the Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia for funding this research work through the project no. (IFKSURG-1742).

Publications

2023

1. **Maashi, M.**, Al-Hagery, M., Rizwanullah, M. and Osman, A., (2023) Automated Gesture Recognition Using African Vulture Optimization with Deep Learning for Visually Impaired People on Sensory Modality Data, Journal of Disability Research, Pages: 1–12, DOI: 10.57197/JDR-2023-0019
2. Alluhaidan, A.S.; **Maashi, M.**; Arasi, M.A.; Salama, A.S.; Assiri, M.; Alneil, A.A. Mud Ring Optimization Algorithm with Deep Learning Model for Disease Diagnosis on ECG Monitoring System. Sensors 2023, 23, 6675. <https://doi.org/10.3390/s23156675>
3. Alsolai, H., Rizwanullah, M., **Maashi, M.**, Othman, M., Alneil A., and Abdelmageed, A. (2023) Leveraging Gradient-Based Optimizer and Deep Learning for Automated Soil Classification Model, CMC, Computers, Materials & Continua 2023, 76(1), 975-992. <https://doi.org/10.32604/cmc.2023.037936>
4. Almuqren, L.; Al-Mutiri, F.; **Maashi, M.**; Mohsen, H.; Hilal, A.M.; Alsaid, M.I.; Drar, S.; Abdelbagi, S. (2023) Sine-Cosine-Adopted African Vultures Optimization with Ensemble Autoencoder-Based Intrusion Detection for Cybersecurity in CPS Environment. Sensors 2023, 15, Sensors 2023, 23(10), 4804; <https://doi.org/10.3390/s23104804>
5. Alamgeer, M., Alkahtani, H., **Maashi, M.**, Othman, M., Hilal, A., Alsaid, M., Azza Osman, A., and Alnei, A. (2023) Optimal Fuzzy Wavelet Neural Network based Road Damage Detection, IEEE Access, in IEEE Access, doi: 10.1109/ACCESS.2023.3283299.
6. Obayya, M.; Alhebri, A.; **Maashi, M.**; Salama, A.S.; Mustafa Hilal, A.; Alsaid, M.I.; Osman, A.E.; Alneil, A.A. (2023) Henry Gas Solubility Optimization Algorithm Based Feature Extraction in Dermoscopic Images Analysis of Skin Cancer. Cancers 2023, 15, 2146. <https://doi.org/10.3390/cancers15072146>.
7. Mengash, H.A.; Alamgeer, M.; **Maashi, M.**; Othman, M.; Hamza, M.A.; Ibrahim, S.S.; Zamani, A.S.; Yaseen, I. Leveraging Marine Predators Algorithm with Deep Learning for Lung and Colon Cancer Diagnosis. Cancers 2023, 15, 1591. <https://doi.org/10.3390/cancers150515912>

8. **Maashi,, M.**, Ali, Y., Motwakel, A., Aziz, A., Hamza, A. and Abdelmageed, A. (2023) Anas Platyrhynchos Optimizer with Deep Transfer Learning based Gastric Cancer Classification on Endoscopic Images, *Electronic Research Archive*, vol, 31 , no, 6, pp. 3200-3217. <https://doi.org/10.3934/era.2023162>

9. Mofadal Alymani¹ Hadeel Alsolai², Mashael Maashi³, Adeeb Alhebri⁴, Hussain Alshahrani⁵, Fahd N. Al-Wesabi⁶, Abdullah Mohamed⁷ and Manar Ahmed Hamza (2023) Dispersal Foraging Strategy with Cuckoo Search Optimization based Path Planning in Unmanned Aerial Vehicle Networks. *IEEE access* , <https://doi.org/10.1109/ACCESS.2023.3262160>

10. Obayya¹, M, Al-Wesabi, F., **Maashi, M**, Mohamed, A., Hamza, M. Drar, S, Yaseen, I, and Alsaid, M (2023) Modified Salp Swarm Algorithm with Deep Learning based Gastrointestinal Tract Disease Classification on Endoscopic Images, *IEEE Access* , <https://doi.org/10.1109/ACCESS.2023.3256084>

11. Alrayes, F. Asiri, M.,. **Maashi, M.**, Nour, M. , Rizwanullah, M, Osman, A., Drar, S. Zamani, A. (2023) Waste classification using vision transformer based on multilayer hybrid convolution neural network, *Urban Climate*, vol 49, <https://doi.org/10.1016/j.uclim.2023.101483>.

12. Alohal¹, M., Alasmari, N., **Maashi, M** , Nouri, A., , Rizwanullah, M., Yaseen, I., Elneil O, and Alneil, A. (2023) Metaheuristics with Deep Learning Driven Phishing Detection for Sustainable and Secure Environment, *Sustainable Energy Technologies and Assessments*, vol 56 <https://doi.org/10.1016/j.seta.2023.103114>.

13. Almuqren, L.; **Maashi, M.**; Alamgeer, M.; Mohsen, H.; Hamza, M.A.; Abdelmageed, A.A. (2023) Explainable Artificial Intelligence Enabled Intrusion Detection Technique for Secure Cyber-Physical Systems. *Applied Sciences* vol, 13, no 3081. <https://doi.org/10.3390/app13053081>

14. Alsolai, H.; **Maashi, M.**; Saeed, M.K.; Mohamed, A.; Assiri, M.; Abdelbagi, S.; Drar, S.; Abdelmageed, A.A. (2023) Leveraging Metaheuristic Unequal Clustering for Hotspot Elimination in Energy-Aware Wireless Sensor Networks. *Sensors* 2023, 23, 2636. <https://doi.org/10.3390/s23052636>

15. Obayya, M.; **Maashi, M.S.**; Nemri, N.; Mohsen, H.; Motwakel, A.; Osman, A.E.; Alneil, A.A.; Alsaid, M.I. (2023) Hyperparameter Optimizer with Deep Learning-Based Decision-Support Systems for Histopathological Breast Cancer Diagnosis. *Cancers* 2023, 15, 885. <https://doi.org/10.3390/cancers15030885>.

16. Li, W., .Özcan, E., Drake, J.H. , **Maashi, M.** (2023) A Generality Analysis of Multiobjective Hyper-heuristics, Information Sciences <https://doi.org/10.1016/j.ins.2023.01.047>
17. Salil bharany and **Mashaël Maashi** (2023) A Critical Investigation into the Blockchain Technology and Its Present-Day Uses, 3rd International Conference on Computing and Information Technology (ICCIT). University of Tabuk, Tabuk, September 2023.
18. Alohal, M., Maashi,M., Faqih,R., Mahgoub, H., Mohamed, A., Assiri, M, and Drar , S. (2023) Spotted Hyena Optimizer with Deep Learning Enabled Vehicle Counting and Classification Model for Intelligent Transportation Systems, ERA, 31(7): 3704–3721. DOI: 10.3934/era.2023188
19. Nauman, A., Obayya, M., Asiri, M.; Yadav, K.; Maashi,M.; Assiri,M.; Ehsan, M.; Kim S., (2023)Minimizing Energy Consumption for NOMA Multi-Drone Communications in Automotive-Industry 5.0, JKSU-CIS, Vol. 101547,<https://doi.org/10.1016/j.jksuci.2023.03.025>
20. Alsolai, H.; Mtouaa, W.; **Maashi, M.S.**; Othman, M.; Yaseen, I.; Alneil, A.A.; Osman, A.E.; Alsaid, M.I.(2023) Optimization of Drone Base Station Location for the Next-Generation Internet-of-Things Using a Pre-Trained Deep Learning Algorithm and NOMA. Mathematics 2023, 11, 1947. <https://doi.org/10.3390/math11081947>
21. Alrayes, F.S.; Asiri, M.M.; **Maashi, M.**; Salama, A.S.; Hamza, M.A.; Ibrahim, S.S.; Zamani, A.S.; Alsaid, M.I. (2023) Intrusion Detection Using Chaotic Poor and Rich Optimization with Deep Learning Model for Smart City Environment. Sustainability 2023, 15, 6902. <https://doi.org/10.3390/su15086902>

2022

22. Sohal, M.; Bharany, S.; Sharma, S.; **Maashi, M.S.**; Aljebreen, M. A (2022) Hybrid Multi-Cloud Framework Using the IBBE Key Management System for Securing Data Storage. *Sustainability*, vol 14, 13561. <https://doi.org/10.3390/su142013561>
23. Alsubari, S. , Aldhyani, T, Deshmukh, S. , **Maashi, M.**, Alharbi, S., Al-Baity, H. (2022) Computational intelligence based Recurrent Neural Network for Identification Deceptive Review in the E-commerce Domain ,*Computational Intelligence and Neuroscience*, <https://doi.org/10.1155/2022/4656846>
24. Kaushik, K., Bhardwaj, A., Dahiya, A., **Maashi, M.**, Al Moteri, M., Aljebreen, M. Bharany , S. (2022) Multinomial Naïve Bayesian Classifier Framework for Systematic Analysis of Smart IoT devices, *Sensors*. Vol. 22, 7318. <https://doi.org/10.3390/s22197318>

25. Bhardwaj, A., Kaushik, K., **Maashi, M.**, Aljebreen, M., Bharany, S. (2022) Alternate Data Stream Attack framework to perform stealth attacks on Active Directory hosts, sustainability, vol. 14, 12288. <https://doi.org/10.3390/su141912288>
26. Adeniyi, E.; Falola, P.B.; **Maashi, M.S.**; Aljebreen, M.; Bharany, S. (2022) Secure Sensitive Data Sharing Using RSA and ElGamal Cryptographic Algorithms with Hash Functions. *Information* vol. 13, 442. <https://doi.org/10.3390/info13100442>.
27. Obayya, M, Eltahir,M., Alharbi,O., **Maashi, M.** Al-Humaimedy, A., Alotaibi, N., Nour, M., Hamza, A. (2022) Intelligent compression then encryption scheme for resource constrained sustainable and smart healthcare environment. *Sustainable Energy Technologies and Assessments*, vol. 53, Part C,102690, <https://doi.org/10.1016/j.seta.2022.102690>.
28. Gupta, N.; **Maashi, M.S.**; Tanwar, S.; Badotra, S.; Aljebreen, M. A (2022) Comparative Study of Software Defined Networking Controllers Using Mininet. *Electronics*, 11, 2715. <https://doi.org/10.3390/electronics11172715>.
29. Panchalaiah N., Al-Humaimedy,A, **Maashi, M.**, Babu, J., . Khalaf O., et al., "Clustered single-board devices with docker container big stream processing architecture," (2022) *Computers, Materials & Continua*, vol. 73, no.3, pp. 5349–5365, 2022. <https://doi.org/10.32604/cmc.2022.029639>.
30. Alrayes, F.S.; Alotaibi, S.S.; Alissa, K.A.; **Maashi, M.**; Alhogail, A.; Alotaibi, N.; Mohsen, H.; Motwakel, A. (2022) Artificial Intelligence-Based Secure Communication and Classification for Drone-Enabled Emergency Monitoring Systems. *Drones*, <https://doi.org/10.3390/drones6090222>
31. Bharany S.; Sharma, S.; Khalaf, O.I.; Abdulsahib, G.M.; Al Humaimedy, A.S.; Aldhyani, T.H.H.; **Maashi, M.**; Alkahtani, H. (2022) A Systematic Survey on Energy-Efficient Techniques in Sustainable Cloud Computing., *Sustainability*, vol, 14, 6256. <https://doi.org/10.3390/su14106256>.
32. Mohammed, M.A., Abdulhasan, M.J., Kumar, N.M., Mostafa, S. A., Maashi, **S.M.**, Khalid, L.T., Abdulaali . H.S., & Chopra, S.S (2022) Automated waste-sorting and recycling classification using artificial neural network and features fusion: a digital-enabled circular economy vision for smart cities. *Multimed Tools Appl.* <https://doi.org/10.1007/s11042-021-11537-0>
33. Gnanavel, S., Sreekrishna, M, Vinodhini M.,Kumaran, R., Amshavalli, S., Alharbi, S., **Maashi, M.**, Khalaf,O., Abdulsahib, G., Alghamdi, A., & Aldhyani. T. (2022), Analysis of Fault Classifiers to Detect the Faults and Node Failures in a Wireless Sensor Network, *Electronics*, vol.,11, no. 10: 1609. <https://doi.org/10.3390/electronics11101609>.
34. Agrawal, R., Kumar, A., AlQahtani, S., **Maashi, M.**, Khalaf, O., Aldhyani. T. (2022), Cache Memory Design for Single Bit Architecture with Different Sense Amplifiers.

Computers, Materials & Continua, vol.73, no.2, pp. 2313-2331,
DOI:10.32604/cmc.2022.029019.

35. Alshareef, H, and **Maashi, M**, (2022). Application of Multi-Objective Hyper-Heuristics to Solve the Multi-Objective Software Module Clustering Problem, *Applied Sciences*, vol. 12, no. 11: 5649. <https://doi.org/10.3390/app12115649>.
36. Lakhan, A. Abed Mohammed, M, Kadry, S., AlQahtani, **S**, **Maashi, M**, Abdulkareem, K, (2022) Federated Learning-Aware Multi-Objective Modeling and blockchain-enable system for IIoT applications, *Computers and Electrical Engineering*, vol. 100, 107839, <https://doi.org/10.1016/j.compeleceng.2022.107839>.
37. **Maashi, M**. (2022). A Comprehensive Review of Software Testing Methodologies Based on Search-based Software Engineering, *Webology* (ISSN: 1735-188X) vol. 19, no. 2, pp. 5716- 5728. <https://www.webology.org/abstract.php?id=1224>.

2021

38. **Maashi, M**. (2021). "Detection Defects in Software Testing Using Machine Learning Techniques". *Design Engineering*, 2021 (7). pp 9340-9359. Retrieved from <http://www.thedesigengineering.com/index.php/DE/article/view/3504>.
39. Hussein, I, Burhanuddin, M, Abed Mohammed, M, Benameur M, Maashi, M, **Maashi, M** (2021) Fully-automatic identification of gynaecological abnormality using a new adaptive frequency filter and histogram of oriented gradients (HOG) , *Expert System* , <https://doi.org/10.1111/exsy.12789>.
40. Kumar, N, Abed Mohammed, M., Abdulkareem, K, Damasevicius, R, Mostafa, S, . **Maashi, M**, Chopra, S. (2021) Artificial Intelligence-based Solution for Sorting COVID Related Medical Waste Streams and Supporting Data-driven Decisions for Smart Circular Economy Practice, *Process Safety and Environmental Protection*, <https://doi.org/10.1016/j.psep.2021.06.026>.
41. Mohammed A. M., Elhoseny, M., Abdulkareem, K., Mostafa, S., **Maashi, M**. (2021) "A Multi-agent Feature Selection and Hybrid Classification Model for Parkinson's Disease Diagnosis", *Transactions on Multimedia Computing Communications and Applications*, vol, 17, no.2. pp 1-22. <https://doi.org/10.1145/3433180>.
42. ,Mohd A, Nasir, N.; Mohammed, M, A.; Abdulkareem, K. Garcia-Zapirain, B. **Maashi, M**., Mostafa, S (2021). Innovative Artificial Intelligence Approach for Hearing-Loss Symptoms Identification Model Using Machine Learning Techniques, *Sustainability*, vol. 13, no. 10: 5406. <https://doi.org/10.3390/su13105406>.

43. Ben Zayed, H, and **Maashi, M**, (2021) Optimizing the Software Testing Problem Using Search-Based Software Engineering Techniques, *Intelligent Automation & Soft Computing*. vol.29, no.1, pp.307-317, <https://doi.org/10.32604/iasc.2021.017239> .
44. Abdulsahib, A, Mahmoud, M., Mohammed, M., Rasheed, H, Mostafa,S, **Maashi, M**(2021) Comprehensive review of retinal blood vessel segmentation and classification techniques: intelligent solutions for green computing in medical images, current challenges, open issues, and knowledge gaps in fundus medical images. *Netw Model Anal Health Inform Bioinforma*, vol. 10, no, 20. <https://doi.org/10.1007/s13721-021-00294-7>.
45. Albalawi. F., and Maashi, **M**, (2021)A Methodology for Selection and Optimization the Software Development Life Cycles based on Genetic Algorithm ,*Intelligent Automation & Soft Computing*. vol.28, no.1, pp.39-52, doi:10.32604/iasc.2021.015657.
46. Al-Waisy, A., AbedMohammed,M, Al-Fahdawi, S, **Maashi, M**, Garcia-Zapirain,P., Abdulkareem, K.,Mostafa, S. (2021) COVID-DeepNet: Hybrid Multimodal Deep Learning System for Improving COVID-19 Pneumonia Detection in Chest X-ray Images, *Computers ,Materials & Continua*, vol.67, no.2, pp.2409-2429, doi: 10.32604/cmc.2021.012955.
37. Hussein, I, Burhanuddin,M, Abed Mohammed , M. Elhoseny, M, Garcia-Zapirain,B, **Maashi, M**, Maashi , M (2021) Fully Automatic Segmentation of Gynaecological Abnormality Using a New Viola–Jones Model, *Computers, Materials & Continua* ,vol.66, no.3, pp.3161-3182, doi:10.32604/cmc.2021.012691.
38. Elhoseny, M. Mohammed, M. A., Mostafa, S. A. Abdulkareem K. H, **Maashi, M** .47 **S.** Garcia-Zapirain, B, Mutlag A. and Maashi, M (2021) A new multi-agent feature wrapper machine learning approach for heart disease diagnosis, *Computers, Materials & Continua*, vol. 67, no.1, pp. 51–71.

2020

- 39 Aldhyani, T, Al-Yaari, M, Alkahtani, H, **Maashi, M**. (2020), Water Quality Prediction Using Artificial Intelligence Algorithms", *Applied Bionics and Biomechanics*, <https://doi.org/10.1155/2020/6659314>.
- 40 Abed M., Abdulkareem, K., Garcia-Zapirain B., A.Mostafa, S., **Maashi, M**, . Alwaisy A., Subhi, M., Mutlag, A. and Le., D (2021) Comprehensive Investigation of Machine Learning Feature Extraction and Classification Methods for Automated Diagnosis of COVID-19 Based on X-ray Images”, *Computers,Materials & Continua*, vol, 66, no, 3. DOI:10.32604/cmc.2021.012874.
- 41 Mohammed, M.; Abdulkareem, K. Mostafa, S.; Khanapi, M.; **Maashi, M**.; Garcia-Zapirain, B.; Oleagordia, I.; Alhakami, H.; AL-Dhief, T. (2020) Voice Pathology Detection and Classification Using Convolutional Neural Network Model”. *Applied Science*, vol .10, 3723.
- 42 Prasanna J., Subathra, M., Mohammed, M., **Maashi, M**.; Garcia-Zapirain, Sairamya, B., Thomas, S.(2020) Detection of Focal and Non-Focal Electroencephalogram Signals Using

Fast Walsh-Hadamard Transform and Artificial Neural Network, *Sensors*, vol. 20, no. 17,4952.

- 43 Mohammed M. A, Abdulkareem K. H. , Al-Waisy A. S. , Mostafa S. A. , Al-Fahdawi , S. , Dinar A. M. , Alhakami ,W. and BAZ, A. , Al-Mhiqani, M. N. , Alhakami, Arbaiy ,H., N. , **Maashi, M. S.** , Mutlag, A. A. ,B. García-Zapirain and De La Torre Díez ,I. D (2020) Benchmarking Methodology for Selection of Optimal COVID-19 Diagnostic Model Based on Entropy and TOPSIS Methods , *IEEE Access*, vol 8, pp. 99115-99131,DOI: 10.1109/ACCESS.2020.2995597.
- 44 **Maashi M.**, Analysis Heart Disease Using Machine Learning (2020), *Multi-Knowledge Electronic Comprehensive Journal For Education And Science Publications (MECSJ)* vol, 29, ISSN: 2616-9185.
- 45 Mutlag, A.A.; Khanapi Abd Ghani, M.; Mohammed, M.A.; **Maashi, M. S.**; Mohd, O.; Mostafa, S.A.; Abdulkareem, K.H.; Marques, G.; de la Torre Díez, I.(2020) MAFC: Multi-Agent Fog Computing Model for Healthcare Critical Tasks Management. *Sensors* , vol 20, 1853.
- 46 **Maashi, M.**, Alwhibi, N., Alamr, F. , Alzahrani, R., Alhamid, A and Altawallah,N. (2020) Industrial Duct Fan Maintenance Predictive approach based on Random Forest. International Conference on Artificial Intelligence and Machine Learning (CAIML 2020). *In proceedings of 9th International Conference on Information Technology Convergence and Services (ITCSE 2020)* May 30~31, 2020, Vancouver, Canada.
- 47 **Maashi, M.**, Almanea, G., Alqurashi, R., Alharbi, N., Alharkan, R., Alsadhan, F. (2020) Solving Student-Project Research Assignment Problems Using A Novel Greedy Linear Heuristic Algorithm: A Case Study At King Saud University, Riyadh Saudi Arabia, *Bioscience Biotechnology Research Communications*, vol, 13, no, 2, pp. 1168-1173. DOI:10.21786/bbrc/13.3/27
- 48 Al-Waisy, A., Al-Fahdawi, S., Mohammed M. A., Abdulkareem, K., Mostafa S., **Maashi, M.**, Arif, M , Garcia-Zapirain B. (2020) COVID-CheXNet: Hybrid Deep Learning Framework for Identifying COVID-19 Virus in Chest X-rays Images, *Soft Computing*. DOI: 10.1007/s00500-020-05424-3

2019

- 49 **Maashi, M.**, Almanea, G., Alqurashi, R., Alharbi, N., Alharkan, R., Alsadhan, F. (2019) A greedy linear heuristic to solve Group-Project allocation problem: A case study at SWE-KSU". International Conference on Communication, Management and Information Technology- ICCMIT'19, Vienna, Austria, March.

2017

- 50 **Maashi, M.** (2017). Heuristics and Hyper-Heuristics - Principles and Applications, chapter Multi-Objective Hyper-Heuristics, pp. 21-39. InTech

2015

- 51 **Maashi, M.**, Kendall, G., and Özcan, E. (2015). Choice function based hyper-heuristics for multi-objective optimization, *Applied Soft Computing*, 28: 312-326.

2014

- 52 **Maashi, M.**, Özcan, E. and Kendall, G. (2014). “A multi-objective hyper-heuristic based on choice function”, *Expert Systems with Applications*, vol. 41, no. 9, pp. 4475-4493.
- 53 **Maashi, M.**, Kendall, G., and Özcan, E. (2014). Comparison of Multi objective Hyper-heuristics on tri-objective WFG test problems. *The 7th Saudi Students Scientific Conference(SSCUK2013)*, Edinburgh, UK, February, Abstract.
- 54 **Maashi, M.** (2014). An Investigation Of Multi-Objective Hyper-Heuristics for Multi-Objective Optimisation. PhD thesis, School of Computer Science, University of Nottingham, UK.

2012

- 55 **Maashi, M.**, Kendall, G., and Özcan, E. (2012). A choice function based hyper-heuristic for multi-objective optimisation. *The 3rd Student Conference on Operational Research (SCOR)* April, Abstract.
- 55 **Maashi, M.**, Kendall, G., and Özcan, E. (2012). A great deluge based learning hyper-heuristic for multi-objective optimisation. *The 54th Operation Research Annual Conference(OR54)*, September. Available at:
<http://www.theorsociety.com/DocumentRepository/Browse.aspx?CatID=3>, (Accessed: 17th April 2013), Abstract.

2009

- 56 **Maashi, M.** (2009). Opportunities and Challenges using VLEs: A Case Study of Universities in Saudi Arabia.. Master dissertation, Faculty of Advanced Technology, University of Glamorgan, UK.

Research Roles and Activities

- **Track Chair**, the 3rd International Conference on Computing and Information Technology (ICCIT), Track2: Recent Trends In Computing And Information Technology, Tabuk University, Tabuk, Saudi Arabia, 110-11 May2023.
- **Guest Associate Editor** for Special Issue "Advances in Software Development and Security Design" Applied Sciences Journal , MDPI. 2023.
- **Member**, Technical program Committee: The 4th International Conference on Data Science, E-learning and Information Systems 2023 (Data'2023) , Dubai.
- **Member**, Technical program Committee: The 3rd International Conference on Computing and Information Technology (ICCIT) ,2023, Tabuk.
- **Program Chair**, International Conference on Computer Control and Digital Systems (ICCCDS'2022) 2022.
- **Member**, Program Committee, The 15th IEEE International Conference on Security of Information and Networks, (SINCONF 2022), Sousse, Tunisia.2022
- **Member**, Program Committee, The 3rd International Conference on Signal Processing, VLSI Design & Communication Systems (SVC 2022).
- **Editor and member**, the editorial board of the *International Journal of Big Data & Health Care* 2022- - until now.
- **Reviewer**, *The International Arab Journal of Information Technology (IAJIT 2022)*
- **Guest Associate Editor** for special issue entitled *Challenges, Tools, and Applications in Industrial Artificial Intelligence in In Frontiers in Artificial Intelligence- AI in Business*,2021.
- **Workshop Organizer**: *The 4th international Conference on Innovative Computing and Communication (ICICC2021) entitled "Sustainable Heterogenous Energy-Aware Systems for next Generation Devices and networks"*
- **Guest Editor** For Special Issue Entitled "Ai, Iot, Blockchain Assisted Intelligent Solutions To Medical & Healthcare" Is In *Computers, Materials & Continua Journal* 2020.
- **Guest Editor for special issue** entitled "*Deep Learning for Internet of Anesthesia, Intensive Care, Emergency and Pain Medicine*" is now open online in *Signa Vitae Journal of Anesthesia*, 2020.
- **Guest Editor for special issue** entitled "*Intelligent system and computational methods in Medical and healthcare solution with it challenges during Covid-19 pandemic in Journal of intelligent System*".2020.
- **Vice of president**, Technical Program Committee, *Artificial Intelligent Society AIS, the 3rd Saudi Mobile Show, Virtual Version* ,2020.
- **Member**, Technical program Committee: *Future Computing Systems (FComp) Committee TPC. 1st International Conference on Future Communications and Computing (MIC-FutureCom 2020)*
- **Member**, Technical program Committee TPC: *The 1st International Conference on Evolutionary Computing (MIC-Evolu 2019)*
- **Member**, Technical program Committee TPC: *The International Conference on Big Data and Security (ICBDS 2019)*
- **Congress Board Member**: *Global 2019 Congress on Computer Engineering (GC-CompEng 2019-till now*.

- **Reviewer** for the International Conference on Artificial Intelligence and Security (ICAIS 2019)
- **Reviewer** for the 4th International Conference on Fuzzy Systems and Data Mining (FSDM 2018)
- **Conference Committees member**, International Conference on Computer Science and Engineering (MIC-Computing-19) 2018-until now
- **Member**, Association for Computing Machinery (ACM), 2018- until now.
- **Lead Editor** for special issue entitled “Computational Engineering” in International Journal of Computational & Neural Engineering (IJCNE) 2017.
- **Editor and member**, the editorial board of the International Journal of Computational & Neural Engineering (IJCNE) 2015- until now
- **Member**, the Automated Scheduling, Optimization and Planning Research Group (ASAP) Reformed (Computational Optimization and Learning (COL) Lab) at the School of Computer Science, University of Nottingham. 2010-2014.
- **Member**, Institute of Electrical and Electronics Engineers (IEEE) Computer Science Society, 2010- 2015.
- **Member**, the Operational Research Society (OR), 2010- 2015.
- **Referee**, in Students Scientific Forum (Multqah) and the second scientific programming competition - Tabuk University, 2015.
- **Member**, Saudi Science Club in Information Technology, 2005-2006.
- **Excellent Reviewer at Publons (Wos)** for more than 200 papers in international scientific journals/conferences including: The IEEE Cybernetics Journal, , IEEE Access, the Computational Optimization and Applications Journal, Applied Soft Computing, International Journal of Information Technology, Decision Making, Advances in Mechanical Engineering, Engineering Optimization and Applied and Computational Mathematics.

Service Activities

- Mentor, Uloum Program, Uloum Society Misk foundation ,2023.
- Mentor, Ebdaa Contest, Mawhiba, 2022.
- Mentor, Neom AI Hekaton Challenge, Entertainment Track, 2020.
- Observer at Accreditation Board for Engineering and Technology (ABET) 2019.
- Cooperative Consultant at National Center for Academic Accreditation & Evaluation (NCAAA) 2019-2020.

Supervised Projects

- 1 Automated detection of white blood cells for Leukemia Cancer using Deep Machine Learning techniques (Master project, 2023).
- 2 A recommender system for the entertainment places in Riyadh city using Machine Learning techniques (B.Sc project, 2023)
- 3 A virtual clinic using AI techniques (B.Sc project, 2023).

- 4 Detection of defects in the software testing using machine learning techniques (Master project, 2022)
- 5 Accident Reporting System based on GPS (Tayseer) (B.Sc project, 2021)
- 6 An investigation and evaluation of effectiveness of the current approaches of e-learning in higher education at kingdom of Saudi Arabia during the Covid-19 pandemic (Master Thesis, 2020)
- 7 Module Clustering Problem in Search-Based Software Engineering for Multi- objective
- 8 Optimization (Master project, 2020)
- 9 Optimizing the Software development lifecycle (Master project, 2019)
- 10 Optimizing the test suite in the regression testing (Master project, 2019)
- 11 Modeling a bus navigation route using GA -optimization method for TSP (Master project, 2018)
- 12 Developing IT smart matching social network application (B.Sc project, 2020)
- 13 Developing a game mobile based application for children with Autism Spectrum Disorder (ASD) (B.Sc project, 2019)
- 14 Industrial Rotating Machinery Maintenance Prediction System using machine language (B.Sc Project 2019)
- 15 Developing an SWE-GPC system for Graduation Project Committee System for Software Engineering Department. This system embedded a proposed new linear algorithm for solving Student-project allocation problem and it applied a graph-coloring method to solve the presentation timetabling problem (B.Sc project, 2018)
- 16 Developing Knowledge Investment Platform for Deanship of Scientific Research at King Saud University (B.Sc project, 2018)
- 17 Solving the examination scheduling optimization problem using GA –Case Study, Tabuk University (B.Sc project, 2015)

Certifications/ Professional Registrations

Accredited Professional certificate from Staff and Educational Development Association (SEDA), UK, 2018.

Professional Development Activities

- Preparation of Technical and Financial Proposals (15 training hours) ,King Abdullah Institute For Research And Consulting Studies, King Saudi University, Jun, 2023.
- The fundamental of International Research Collaborations (5 training hours), Deanship of skill Development, King Saudi University, Dec, 2022.
- An effective Negotiation Skills (5 training hours), Deanship of skill Development, King Saudi University, Dec, 2022.
- Management of the digital content training, (4 training hours), Deanship of Electronic Transactions, King Saudi University, 2021
- Completed the new faculty program (36 training hours), Deanship of skill Development, King Saudi University, 2017-2018.
- Workshop of Partnership between the university and the business sector, KSU,2018
- Workshop of UK-KSA Scientific Workshop on Clean Energy & AI, Research and Deployment Office, Ministry of Education , Riyadh ,29019.

- Workshop of Building and strengthening community links workshop Between the university and the community under the vision of the community 2030, KSU, 2019.
- Latex Course, University of Nottingham, Nottingham, United Kingdom. 2010.
- Five courses in National Taught Course in Operational Research (NATCOR) in United Kingdom (Heuristics and Approximation Algorithms, Convex Optimization, Stochastic Modelling, Simulation, Combinatorial Optimization) 2010-2011.

Taught Courses

- SWE 608 Search-based Software Engineering (PhD program- King Saud University)
- SWE 596 Thesis Proposal Preparation (Master program- King Saud University)
- SWE506 Software Project Management (Master course- King Saud University)
- SWE 505 Software Testing and Quality (Master course- King Saud University)
- SWE564 Software Data Mining (Master course- King Saud University)
- SWE520 Complex Software Engineering Systems (Master course- King Saud University)
- SWE381 Web Applications Development (BSc course King Saud University)
- SWE466 Software Project Management (BSc course King Saud University)
- SWE482 Human and Computer Interaction (BSc course King Saud University)
- IS230 Introduction of Database System (BSc course -Information System Department-King Saud University)
- SWE599 Mater ProjectII (King Saud University)
- SWE598 Mater ProjectI (King Saud University)
- SWE496 BSc Project 1(King Saud University)
- SWE497 BSc Project2 (King Saud University)
- SWE301 Software Engineering Requirements (Al Yamaha University)
- SWE402 Software Maintenance and Evolution (Al Yamaha University)
- CSC420 Theory of Computation (Tabuk University)
- CSC450 Artificial Intelligence. (Tabuk University)
- CSC321 Design and Analysis of Algorithms (Tabuk University)
- CSC590 Project 1(Tabuk University)
- CSC591 Project2 (Tabuk University)
- Comp101 Introduction of Computer (Tabuk Health Collage for Girls)
- Comp 102 Introduction of Computer-Level2 (Tabuk Health Collage for Girls).

Workshops & Speech by Dr Maashi

- Data mining and Analysis, Collage of Computer and information Technology, Tabuk University ,2023.
- Research Centers and Research Partnerships with Industrial and Development Sectors: a Roadmap, Sustainable Partnership Conference, Ministry of Education 24-25 November 2022.

- Chief Guest of Inaugural Function in a Five-Day National level online Faculty Development Program on Recent Trends in Artificial Intelligence and Cyber Security from 01-05 November 2022. Department of Computer Science & Engineering, Shri Vishnu Engineering College for Women, Bhimavaram India.2022.
- Keynote Speaker at International Conference on Artificial intelligence and Sustainable Engineering in Driving Smart Cities (ICRASES2022), 29th - 31st , March-2022, Department of Computer Science & Engineering, Shri Vishnu Engineering College for Women, Bhimavaram India.
- Ethics in Computer Science and Information Technology, Collage of Computer and information Technology, Tabuk University ,2021
- Fundamentals of Scientific Research (Training Program 4 Units), Deanship of Skills Development , KSU,2021.
- Ethics in Computer Science and Information Technology, Deanship of Scientific Research, KSU,2021
- Speech on Overview of ML Applications as Resource Person in A Five-Day National level online Faculty Development Program on Applications of Machine Learning, 15 - 19, June-2021, Department of Computer Science & Engineering, Shri Vishnu Engineering College for Women, Bhimavaram India.2021
- Chief Guest of Inaugural Function in A Five-Day National level online Faculty Development Program on Applications of Machine Learning, 15 - 19, June-2021, Department of Computer Science & Engineering, Shri Vishnu Engineering College for Women, Bhimavaram India.
- How Artificial Intelligent plays roles in solving optimization problems, Artificial Intelligent Society AIS, the 3rd Saudi Mobile Show, Virtual Version ,2020
- Discussion Panel: The academic promotion: advice and recommendations in scientific publications, Graduate Study and Scientific Research Unit, College of Computer, and information Sciences, 2020.
- Benchmarking Methodology for Selection of Optimal COVID-19 Diagnostic Model Based on Entropy and TOPSIS Methods, the 1st Knowledge Integration Forum, Ministry of Education, KSA, 2020. Scientific Publication, invited talk, Master program SWE540, Software Department, KSU, November 2020.
- Research Publication step by step, Deanship of Scientific Research, KSU,2019.
- How to present a technical information effectively, Central Library, KSU, 2018
- How to enjoy the technology with our kids, King Salman Social Center ,2018

Academic Committees Memberships

-King Saud University/ Collage of Computer and Information sciences

- ***Member*** Science, Technology & Engineering Innovation Unit (STEM), Entrepreneurship Institute, King Saud University,2022 till now
- ***Chairman***, Committee of Media, and Public Relation Committee - College of Computer and Information Sciences, University female campus 2020.

- **Chairman**, Committee of Digital Content - College of Computer and Information Sciences, University 2020
- **Chairman**, Committee of Media, and Public Relation Committee - Department of Software Engineering, College of Computer and Information Sciences 2019.
- **Chairman**, Committee of Community Service - College of Computer and Information Sciences 2017- 2019.
- **Coordinator**, Committee of Graduation Project- Department of Software Engineering, College of Computer, and Information Sciences - King Saud University, 2017- 2019
- **Coordinator**, Committee of Academic Accreditation - Department of Software Engineering, College of Computer, and Information Sciences - King Saud University, 2017- 2020.

-Tabuk University- Collage of Computer and Information Technology

- **Member and coordinator**, Committee of Staff Training and Skill Development - College of Computer and Information Technology - Tabuk University, 2014-2015
- **Member and coordinator**, Committee of Supervision and Follow-up Examinations - College of Computer and Information Technology - Tabuk University, 2014-2015
- **Member and coordinator**, Committee of the Scientific Research - College of Computing and Information Technology, Tabuk University, 2014 -2015
- **Member**, Committee of the College Development – College of Computer and Information Technology - Tabuk University, 2014-2015.
- **Member**, Committee of Curriculum and Courses, College of Computer and Information Technology, Tabuk University, 2014-2015.
- **Member**, Committee of Academic Affairs - College of Computer and Information Technology - Tabuk University, 2014 – 2015.
- **Member**, Committee of Course Files - College of Computer and Information Technology - Tabuk University, 2014 - 2015.
- **Member**, Committee of Quality and Accreditation - College of Computer and Information Technology - Tabuk University, 2014 - 2015.
- **Member**, Committee of the Strategic Planning - College of Computer and Information Technology - University of Tabuk, 2014 -2015.
- **Member and coordinator**, Unit of E-learning - College of Computer and Information Technology - Tabuk University, 2014-2015
- **Member and coordinator**, Unit of Measurement and Evaluation - College of Computer and Information Technology - Tabuk University, 2014-2015
- **Member**, Unit of Student Affairs and Alumni, College of Computing and Information Technology, Tabuk University, 2014-2015

-Collage of Health College for Girls, Tabuk

- **Member**, Committee of Academic Development, 2006-2007
- **Member**, Committee of Exam, 2006 -2007

-Other institutions

- **Member**, Executive Committee in the 19th JCCI Elections, 2005-2006

- *Member, Organizing Committee of the 7th Jeddah Economic Forum 2006.*

Workshop Participation

- Workshop of Partnership between the university and the business sector, KSU, 2018
- Workshop of UK-KSA Scientific Workshop on Clean Energy & AI, Research and Deployment Office, Ministry of Education, Riyadh, 2019.
- Workshop of Building and strengthening community links workshop Between the university and the community under the vision of the community 2030, KSU, 2019.
- Webinar of IEEE Authorship and Open Access Symposium: Tips and Best Practices to Get Published from IEEE, 30 March 2022.

Award & Reward

- Winning the Second place in the 9th Undergraduate Research Competition, Abu Dhabi University for the project " Accident Reporting System based on GPS (Tayseer) in the software category.
- Distinction certificate from the Saudi Arabian Cultural Bureau, Saudi Embassy in London, United Kingdom for the distinction in Scientific Research. 2014.
- Reward from the Saudi Arabian Cultural Bureau, Saudi Embassy in London, United Kingdom for the distinction in academic year 2012-2013.
- Reward from the Saudi Arabian Cultural Bureau, Saudi Embassy in London, United Kingdom for the distinction in academic year 2013-2014.
- Her name appeared in [the honor board](#) on the website of Saudi Arabian Cultural Bureau in London, for the distinction research and study.

References Available Upon Request