

# Mohammed Amoon Sharaby

*(Professor of Computer Science & Engineering)*

## OBJECTIVES

- Continuously improving learning methodologies to enhance teaching effectiveness.
- Integrating professional practice effectively with teaching.
- Active and high-quality research outputs.
- Effective supervision of research students.
- Providing effective leadership and contributing to administrative services on various Committees.
- Substantial contribution to the development of the University/College.

## PERSONAL

**Name** : Mohammed Amoon Ahmed Sharaby  
**Place of birth** : Menouf - Menoufia, Egypt.  
**Date of birth** : 9 / 2 / 1974  
**General Specialization** : Computer Science & Engineering  
**Specific Specialization** : Distributed Computing Systems  
**Current position** : Professor of computer science and engineering/Computer Science Department / Applied Studies College / King Saud University / Saudi Arabia.  
**Affiliations** : 1. King Saud University, Riyadh 11437, 28095, Saudi Arabia.  
2. Menoufia University, Menouf, Egypt.  
**Gender** : Male  
**Nationality** : Egyptian  
**E-mail** : mamoon@ksu.edu.sa, m\_amoon74@yahoo.com, mohammedamoon3@gmail.com  
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## EDUCATION

- PhD in Computer Science and Engineering, Faculty of Electronic Engineering, Egypt, 2006. Dissertation title: "Development of a social interface to intelligent agents directed to control interactions in distributed systems".  
Committee: Prof. Hany harb and Prof. Ibrahim Zakria Mousa (Chair).
- M. Sc in Computer Science and Engineering, Faculty of Electronic Engineering, Egypt, 2001. Dissertation title: "Parallel task scheduling for distributed memory machines".  
Committee: Prof. Fawzy Aly Torkey and Prof. Mohamed Said Abou Gabal (Chair).
- B. Sc in Computer Science and Engineering, Faculty of Electronic Engineering, Egypt, 1996.

## ACADEMIC EMPLOYMENT

- **Professor**, Department of Computer Science and Engineering / Applied Studies College / King Saud University/ Saudi Arabia from July 2025 to now.
- **Professor**, Department of Computer Science and Engineering / Faculty of Electronic Engineering / Menoufia University / Egypt from July 2019 to now.

- **Professor**, Department of Computer Science / College of Community / King Saud University/ Saudi Arabia from June 2020 to now.
- **Associate professor**, Department of Computer Science and Engineering / Faculty of Electronic Engineering / Menoufia University / Egypt from May 2014 to July 2019.
- **Associate professor**, Department of Computer Science / College of Community / King Saud University/ Saudi Arabia from Feb. 2013 to June 2020.
- **Assistant professor**, Department of Computer Science / College of Community / King Saud University/ Saudi Arabia from Aug. 2007 to Jan. 2013.
- **Quality Management Representative (QMR)** for ISO 9001 at Riyadh Community College/King Saud University from 2009 to now.
- **Internal auditor** for ISO 9001 at King Saud University from 2009 to now.
- **Board of Assessors (BOA)** member at King Saud University from 2018 to now.
- **Lecturer**, Department of Computer Science and Engineering / Faculty of Electronic Engineering / Menoufia University / Egypt from 2006 to 2007.
- **Part time lecturer**, Computer Science & Information technology departments in the faculty of information and computers / Menoufia university and I thought logic design (I & II) and Computer languages (Java I and Java II) courses from 2006 to 2007.
- **Part time lecturer**, faculty of engineering in Tanta university and I thought the digital systems course from 2006 to 2007.
- **Part time lecturer**, Maadi Modern Academy and I taught operating systems and Internet & Multimedia courses from 2006 to 2007.
- **Part time lecturer**, Java I, Java II, VB, and ICDL courses at the Computer training center of the faculty of engineering / Menoufia University / Egypt.
- **Part time instructor**, SI (IBM Authorized center) for teaching courses of the mission of the Egyptian Communication Ministry for alumnus from 2000 to 2002.
- **Assistant lecturer**, Department of Computer Science and Engineering / Faculty of Electronic Engineering / Menoufia University /Egypt from 2001 to 2006.
- **Demonstrator**, Department of Computer Science and Engineering / Faculty of Electronic Engineering / Menoufia University / Egypt from 1996 to 2001.
- **Part time instructor**, training courses of the mission of the Egyptian Communication Ministry for alumnus from 1999 to 2004 at Menoufia University.

## PUBLICATIONS

- 1) F. A. Torkey, M. A. El Rabeey, and M. A. Amoon, "*The Effect of Static Number of Successors on Optimal Task Scheduling Algorithm for Distributed Memory Machines,*" in proc. of IEEE E/IT conf., USA, Jan. 2000.
- 2) F. A. Torkey, M. A. El Rabeey, and M. A. Amoon, "*A Parallel Task Scheduling Algorithm for DistributedMemory Machines with Bounded Number of Processors,*" in proc. of electronic engineering journal, Vol. 5, 2003.
- 3) H. M. Kelash, H. M. Faheem, M. Amoon, and G. M. Ali, "*A Social Agent Interface for Resource Management in Distributed Systems,*" in proc. of Int. conf. on Computational Intelligence for Modelling, Control, and Automation, Vienna-Austria, November 2005.
- 4) H. M. Kelash, H. M. Faheem, and M. Amoon, "*A Multiagent System for Distributed Systems Management,*" World Academy journal of science, engineering and technology, Vol. 11, 2006, Pp. 91-96.
- 5) H. M. Kelash, H. M. Faheem, and M. Amoon, "*Efficient Use of Mobile Agents in the Management of Distributed Systems,*" GESJ: Computer Sciences and telecommunications International Journal, No. 2(9), 2006, Pp. 39-47.
- 6) H. M. Kelash, H. M. Faheem, and M. Amoon, "*It takes a Multiagent System to manage Distributed Systems,*" IEEE potentials, Vol. 26, Issue 2, 2007, Pp. 39-45.
- 7) M. Amoon, M. Mowafey and T. Altameem, "*A Multiagent-Based System for Scheduling Jobs in Computational Grids,*" AIML International Journal, Vol. 9, Issue 2, 2009, pp. 19-27.

- 8) T. Altameem and M. Amoon, "**An Agent-Based approach for dynamic adjustment of scheduled Jobs in Computational Grids**", Journal of Computer and Systems Sciences International, Vol. 49, No. 5, 2010, Pp. 765–772.
- 9) F. Omara, N. Elfishawy, S. elkazaz and M. Amoon, "**Personalized Meta Search Engine**", International Journal of Computer Information Systems, Vol. 1, No. 3, 2010, Pp 10-17.
- 10) M. Amoon, "**Design of a Fault-Tolerant Scheduling System for Grid Computing**," In Proc. of IEEE ICNDC conf., Beijing, China, 21-24 Sep. 2011.
- 11) F. Omara, N. Elfishawy, S. elkazaz and M. Amoon, "**Analysing Anchor Links to Enhance the web snippet clustering Technique**," The 8<sup>th</sup> International Conference on Informatics and Systems (INFOS2012), Cairo, Egypt, 14-16 May 2011.
- 12) M. Amoon, "**A Fault-tolerant Scheduling System for Computational Grids**," Journal of Computers and Electrical Engineering, Vol. 38, Issue 2, 2012, pp. 399-412, Elsevier.
- 13) M. Amoon and H. M. Faheem, "**Scheduling Jobs in Face of Status Update Timing of Resources in Computational Grids**," International Journal of Grid and Distributed Computing, Vol. 5, No. 2, 2012, pp. 33-42.
- 14) M. Amoon, "**Fault Tolerance in Grids using Job Replication**," Journal of Computing, Vol. 11, Issue 2, 2012, pp. 115-121.
- 15) Mohammed Amoon, "**A Fault Tolerant Scheduling System Based on Checkpointing for Computational Grids**," International Journal of Advanced Science and Technology, Vol. 48, November 2012, pp. 115-124.
- 16) M. Amoon, "**A job checkpointing system for computational grids**," Central European Journal of Computer Science, Vol. 3, Issue 1, 2013, pp 17-26, Springer.
- 17) F. Maghraby, H. M. Faheem, M. Roushdy and M. Amoon, "**A Grid based Medical Image Retrieval System using Alchemi**," Proc. of the 15<sup>th</sup> International Conference on Enterprise Information Systems (ICEIS), 4-7 July, 2013, France.
- 18) Amr M. Ragheb, Mohammed Amoon et al, "**An efficient fusion technique for quality enhancement of remotely sensed images**," Applied Geomatics, Vol. 6, Issue 4, 2014, pp. 197-205, Springer.
- 19) M. Amoon et al, "**Study of the whole-body vibrations in Cairo different transportation**" Information (Japan), vol. 17, issue 9B (2014).
- 20) Rania A. Ghazy, Mohammed Amoon et al, "**Block based embedding of encrypted watermarks using singular value decomposition**," Optik Journal, Vol. 125, Issue 20, 2014, pp. 6299-6304, Elsevier.
- 21) M. Amoon, "**A framework for providing a hybrid fault tolerance in cloud computing**," In Proc. of IEEE Science and Information Conference (SAI) conf., London, England, pp. 844-849, 28-30 July 2015.
- 22) Mohammed Amoon, "**Adaptive Framework for Reliable Cloud Computing Environment**," IEEE Access, Vol. 4, 2016, pp. 9469 - 9478.
- 23) Mohammed Amoon, "**A Multi Criteria-Based Approach for Virtual Machines Consolidation to Save Electrical Power in Cloud Data Centers**," IEEE Access, Vol. 6, 2018, pp. 24110 - 24117.
- 24) Mohammed Amoon and Tarek E. El. Tobely, "**A Green Energy-Efficient Scheduler for Cloud Data Centers**," Cluster Computing-The Journal of Networks, Software Tools and Applications, Vol. 22, Issue 2 Supplement, March 2019, pp. 3247–3259.
- 25) Mohammed Amoon, Nirmeen El-Bahnasawy and Mai ElKazaz, "**An Efficient Cost-based Algorithm for Scheduling Workflow Tasks in Cloud Computing Systems**," Neural Computing and Applications, Vol. 31, Issue 5, May 2019, pp. 1353–1363, Springer.
- 26) Toriki Altameem and Mohammed Amoon, "**Crime Activities Prediction Using Hybridization of Firefly Optimization Technique and Fuzzy Cognitive Map Neural Networks**," Neural Computing and Applications, Vol. 31, Issue 5, May 2019, pp. 1263–1273, Springer.
- 27) Toriki Altameem and Mohammed Amoon, "**Hybrid tolerance rough fuzzy set with improved monkey search algorithm-based document clustering**," Journal of Ambient Intelligence and Humanized Computing, 2018, Springer. <https://doi.org/10.1007/s12652-018-1013-y>.
- 28) Mohammed Amoon, Nirmeen El-Bahnasawy, Samy Sadi and Manar Wagdi, "**On the Design of Reactive Approach with Flexible Checkpoint Interval to Tolerate Faults in Cloud Computing Systems**," Journal of Ambient Intelligence and Humanized Computing, Vol. 10, Issue, 11, November 2019, pp. 4567–4577.
- 29) Abdulaziz Alarifi, Fathi Abdelsamie and Mohammed Amoon, "**A Fault-tolerant Aware Scheduling Method for Fog-Cloud Environments**," Plos One, Vol. 14, Issue 10, 2019.
- 30) Kalka Dubey, Mohammed Amoon et al, "**A Management System for Servicing Multi-Organizations on Community Cloud Model in Secure Cloud Environment**," IEEE Access, Vol. 7, Issue 1, 2019, pp. 159535159546.

- 31) Heba M. Eldesokey, Mohamad Amoon, Said Abd Elaaty and Fathi E. Abd El-Samie, "**Earlier Deadline Algorithm for Virtual Machine Allocation**," Menoufia Journal of Electronic Engineering Research, Volume 28, 2019, Page 326-331.
- 32) Mohammed Amoon, Torki Altameem and Ayman Altameem, "**RRAC: Role based reputed access control method for mitigating malicious impact in intelligent IoT platforms**," Computer Communications, Vol. 151, Feb. 2020, pp. 238-246.
- 33) Hanaa A. Abdallah, Mohammed Amoon et al, "**An Embedding Approach Using Orthogonal Matrices of the Singular Value Decomposition for Image Steganography**," Multimedia Tools and Applications, Vol. 79, Issue 11-12, March 2020, pp. 7175-7191.
- 34) Torki Altameem, Mohammed Amoon and Ayman Altameem, "**A deep reinforcement learning process based on robotic training to assist mental health patients**," Neural Computing and Applications, 2020, <https://doi.org/10.1007/s00521-020-04855-1>.
- 35) Mohammed Amoon, Torki Altameem and Ayman Altameem, "**Internet of things Sensor Assisted Security and Quality Analysis for Health Care Data Sets Using Artificial Intelligent Based Heuristic Health Management System**," Measurement, Vol. 161, Dec. 2020, <https://doi.org/10.1016/j.measurement.2020.107861>.
- 36) Abdulaziz Alarifi, Kalka Dubey, Mohammed Amoon, et al. "**Energy-Efficient Hybrid Framework for Green Cloud Computing**," IEEE Access, Vol. 8, 2020, pp. 115356-115369.
- 37) Abdulaziz Alarifi, Mohammed Amoon, et al, "**A Novel Hybrid Cryptosystem for Secure Streaming of High Efficiency H.265 Compressed Videos in IoT Multimedia Applications**," IEEE Access, Vol. 8, 2020, pp. 128548-128573.
- 38) Abdulaziz Alarifi, Mohammed Amoon, et al, "**Optical PTFT Asymmetric Cryptosystem-Based Secure and Efficient Cancelable Biometric Recognition System**," IEEE Access, Vol. 8, 2020, pp. 221246 – 221268.
- 39) Fayez Alqahtani, Mohammed Amoon and Aida A. Nasr, "**Reliable scheduling and load balancing for requests in cloud-fog computing**," Peer-to-Peer Networking and Applications, Vol. 14, 2021, pp. 1905-1916.
- 40) Heba M. Eldesokey, Saied M. Abd El-atty, Walid El-Shafai, Mohammed Amoon, Fathi E. Abd El-Samie, "**Hybrid swarm optimization algorithm based on task scheduling in a cloud environment**," International Journal of Communication Systems, Vol. 34, no. 13, 2021, pp. 1-14.
- 41) Fayez Alqahtani, Mohammed Amoon and Walid El-Shafai, "**A Fractional Fourier Based Medical Image Authentication Approach**," Computers, Materials & Continua, Vol. 70, no. 2, 2022, pp. 3133-3150.
- 42) GH Alshammri, AK Samha, EED Hemdan, Mohammed Amoon, W El-Shafai, "**An Efficient Intrusion Detection Framework in Software-Defined Networking for Cybersecurity Applications**," Computers, Materials & Continua, Vol. 72, no. 2, 2022, pp. 3529-3548.
- 43) Ghalib H Alshammri, Amani K Samha, Walid El-Shafai, Emad A Elsheikh, Ebrahim Abdel Hamid, Mohamed I Abdo, Mohammed Amoon, Fathi E Abd El-Samie, "**Three-Dimensional Video Super-Resolution Reconstruction Scheme Based on Histogram Matching and Recursive Bayesian Algorithms**," IEEE Access, Vol. 10, 2022, pp. 41921-41937.
- 44) Fatma A. Hossam Eldein Mohamed; Walid El-Shafai; Hassan M. A. Elkamchouchi; Adel ELfahar; Abdulaziz Alarifi; Mohammed Amoon; Moustafa H. Aly; Fathi E. Abd El-Samie; Aman Singh; Ahmed Elshafee, "**A Cancelable Biometric Security Framework Based on RNA Encryption and Genetic Algorithms**," IEEE Access, Vol. 10, 2022, pp. 55933 - 55957.
- 45) Ahmed ElShafee, Walid El-Shafai, Abdulaziz Alarifi, Mohammed Amoon, Aman Singh and Moustafa H. Aly, "**Real-Time Multi-Class Infection Classification for Respiratory Diseases**," Computers, Materials & Continua, Vol. 73, no. 2, 2022, pp. 4157-4177.
- 46) Saad Aldosary, Doaa Abo Hussien, Mohammed Amoon, Ashraf El- Sisi, Haitham, Khaled, Nirmeen ElBahnasawy "**On the Design of an Algorithm for Mobility Management Over Fog Geographical Allocation for Healthcare Applications**," Journal of Nanoelectronics and Optoelectronics, Vol. 18, No. 1, 2023, pp. 95103.
- 47) Mohammed Amoon, Torki Altameem, Mohammed Hashem, "**Consistent Healthcare Safety Recommendation System for Preventing Contagious Disease Infections in Human Crowds**," Sensors, Vol. 23, 9394.
- 48) Asmaa shoker, Mohammed Amoon, Ayman M. Bahaa-Eldin, Nirmeen A. El-Bahnasawy, "**Resource Allocation Strategy in Fog Computing: Task Scheduling in Fog Computing Systems**," Journal of Communication Sciences and Information Technology, Vol. 1, 2023, pp. 1-11.
- 49) Vatsal Vasani, Amit Kumar Bairwa, Sandeep Joshi, Anton Pljonkin, Manjit Kaur, Mohammed Amoon, "**Comprehensive Analysis of Advanced Techniques and Vital Tools for Detecting Malware Intrusion**," Electronics, Vol. 12(20), 2023, pp. 4299.

- 50) Manjit Kaur, Dilbag Singh, Satyabrata Roy, Mohammed Amoon, “*Efficient Skip Connections-Based Residual Network (ESRNet) for Brain Tumor Classification*,” *Diagnostics*, Vol. 13(20), 2023, pp. 3234.
- 51) Ashima Kukkar, Yugal Kumar, Jasminder Kaur Sandhu, Manjit Kaur, Tarandeep Singh Walia, Mohammed Amoon, “*DengueFog: A Fog Computing-Enabled Weighted Random Forest-Based Smart Health Monitoring System for Automatic Dengue Prediction*,” *Diagnostics*, Vol. 14(6), 2024, pp. 624.
- 52) Manjit Kaur, Dilbag Singh, Vijay Kumar, Umashankar Rawat, Mohammed Amoon, “*DSSCNet: Deep Custom Spatial and Spectral Consistency Layer-Based Dehazing Network*,” *IEEE Access*, Vol. 12, 2024, pp. 4432544334.
- 53) Chien-Ming Chen, Yiru Hao, Saru Kumari, Mohammed Amoon, “*An Authentication Protocol for Federated Learning with Blockchain in Consumer Electronic Assisted Autonomous Driving Environments*,” *IEEE Transactions on Consumer Electronics*, Vol. 71(1), 2025, pp. 2231 - 2242.
- 54) Deepak Thakur, Tanya Gera, Ambika Aggarwal, Madhushi Verma, Manjit Kaur, Dilbag Singh, Mohammed Amoon, “*SUNet: Coffee Leaf Disease Detection using Hybrid Deep Learning Model*,” *IEEE Access*, Vol. 12, 2024, pp. 149173- 149191.
- 55) Yuzhe Zhang, Huan Liu, Yang Xiao, Mohammed Amoon, Dalin Zhang, Di Wang, Shusen Yang, Chai Quek, “*LLM-Enhanced Multi-Teacher Knowledge Distillation for Modality-Incomplete Emotion Recognition in Daily Healthcare*,” *IEEE Journal of Biomedical and Health Informatics*, Vol. 29(9), 2025, pp. 6406 - 6416.
- 56) Zhendong Song, Tao Gong, Menglin Xie, Jinda Luo, Thippa Reddy Gadekallu, Mohammed Amoon, Chien-Ming Chen, Saru Kumari, Ning Liu, “*Secure and Efficient Fog-Assisted Quantum-Inspired Wearable Healthcare Consumer Electronics IoT System*,” *IEEE Transactions on Consumer Electronics*, Vol. 71(1), 2025, pp. 2252 - 2261.
- 57) Brijmohan Lal Sahu, Preeti Chandrakar, Saru Kumari, Chien-Ming Chen, Mohammed Amoon, “*Blockchain and Machine Learning Integrated Secure Driver Behavior Centric Electric Vehicle Insurance Model*,” *IEEE Transactions on Intelligent Transportation Systems*, Vol. 25(11), 2024, pp. 19073-19087.
- 58) Abdalla Hadabi, Zheng Qu, Mohammed Amoon, Chien-Ming Chen, Saru Kumari, Hu Xiong, “*Secure personal-health-records searching in edge-based Internet of Medical Things through plaintext checkable encryption*” *Computers and Electrical Engineering*, Vol. 118, 109373
- 59) Rosmeri Martínez-Licort, Carlos De La Cruz León, Deevyankar Agarwal, Benjamín Sahelices, Isabel De La Torre, José Pablo Miramontes-González, Mohammed Amoon, “*Breast Carcinoma Prediction through Integration of Machine Learning Models*,” *IEEE Access*, Vol. 12, 2024, pp. 134635 - 134650.
- 60) Hu Xiong, Lingxiao Gong, Ruoxia Li, Saru Kumari, Chien-Ming Chen, Mohammed Amoon, “*Blockchain Enabled Distributed Identity-Based Ring Signature with Identity Abort for Consumer Electronics*,” *IEEE Transactions on Consumer Electronics*, Vol. 70(3), 2025, pp. 5340 - 5352.
- 65) Yue Zhao, Farhan Ullah, Chien-Ming Chen, Mohammed Amoon, Saru Kumari, “*Efficient malware detection using hybrid approach of transfer learning and generative adversarial examples with image representation*,” *Expert Systems*, Vol. 42(2), 2025, e13693.
- 61) Farhan Ullah, Leonardo Mostarda, Diletta Cacciagrano, Chien-Ming Chen, Mohammed Amoon, Saru Kumari, “*Metaheuristic-Driven Secure Task Optimization for Consumer Edge Devices*,” *IEEE Consumer Electronics Magazine*, Vol. 14(4), 2025, pp. 57 - 65.
- 64) Hua Wei, Junfeng Miao, Jianhui Lv, Chien-Ming Chen, Saru Kumari, Mohammed Amoon, “*Secure and Trustworthy Data Management Mechanism for Dance-Consumer Electronics in AIoT*,” *IEEE Transactions on Consumer Electronics*, Vol. 71(1), 2025, pp. 1970 - 1979.
- 66) Susel Góngora Alonso, Isabel Herrera Montano, Isabel De la Torre Díez, Manuel Franco-Martín, Mohammed Amoon, Jesús-Angel Román-Gallego, María-Luisa Pérez-Delgado, “*Predictive Modeling of Hospital Readmission of Schizophrenic Patients in a Spanish Region Combining Particle Swarm Optimization and Machine Learning Algorithms*,” *Biomimetics*, Vol. 9(12), 2024, 752.
- 67) Ruijia Gou, Wei Wang, Zongyao Liu, Thippa Reddy Gadekallu, Mohammed Amoon, Chuan Lin, “*An Adaptive Digital Twin-Driven Model Based on Consumer Internet of Things to Ensure the Safe Operation of Aero- Engine*,” *IEEE Transactions on Consumer Electronics*, Vol. 71(2), 2025, pp. 6392 – 6400.
- 68) Jinglong Chen, He Lu, Wenxuan Xu, Yang Yang, Mohammed Amoon, Saru Kumari, “*A blockchain-based trusted vehicle service recommendation scheme in intelligent transport systems*,” *Security and Privacy*, Vol. 8(1), 2025, e452.
- 69) Abdullah Baihan, Mohammed Amoon, Torki Altameem, Mohammed Hashem, “*Pioneering Wearable Sensor-Driven Health Monitoring System for Contagious Disease Prevention with Intelligent Crowd-Counting Models*,” *IEEE Sensors Journal*, Vol. 25(4), 2025, pp. 7403 - 7416.

- 70) Jiang Jiang, Fenglei Wang, Yao Lyu, Lingling Zhang, Mohammed Amoon, “*Deep Learning Driven Secure Music Traffic Transmission in Consumer Internet of Things*,” IEEE Transactions on Consumer Electronics, Vol. 71(2), 2025, pp. 6426 - 6436.
- 71) Chien-Ming Chen, Yiru Hao, Saru Kumari, Mohammed Amoon, “*An Intelligent Blockchain-Enabled Authentication Protocol for Transportation Cyber-Physical Systems*,” IEEE Transactions on Intelligent Transportation Systems, Vol. 26(9), 2025, pp. 14053 - 14066.
- 72) Anjali Bansal, Saru Kumari, Nishant Doshi, Mohammed Amoon, Marko Hölbl, “*Security enhanced CLS and CL-AS scheme without pairings for VANETs*,” IEEE Access, Vol. 13, 2025, pp. 42508 - 42520.
- 73) Guangwu Hu, Saru Kumari, Mohammed Amoon, Chien-Ming Chen, “*Green Rate-Splitting Multiple Access for Multicell and Rate Fairness Maximization*,” International Journal of Communication Systems, Vol. 38(4), 2025, e6003.
- 74) Mazin Taha, Ting Zhong, Rashad Elhabob, Hu Xiong, Mohammed Amoon, Saru Kumari, “*Certificateless searchable encryption with cryptographic reverse firewalls for IIoT*”, Computer Standards & Interfaces, Vol. 95, 2025, pp. 104034.
- 75) S Suhasini, Hemalatha Thanganadar, Surendra Kumar Shukla, Achyut Shankar, Fabio Arena, Mohammed Amoon, “*Smart Energy Management Based Task Allocation with Security Analysis Using Machine Learning Algorithms*”, Concurrency and Computation: Practice and Experience, Vol. 37(25-26), 2025, e70283.
- 76) Yilong Ren, Ya Gao, Wenxiang Xu, Chien-Ming Chen, Mohammed Amoon, “*Variable Grid-Based Path-Planning Approach for UAVs in Air-Ground Integrated Network*”, Transactions on Emerging Telecommunications Technologies, Vol. 36(11), 2025, e70276.
- 77) Peichen Li, Xingwei Wang, Bo Yi, Saru Kumari, Mohammed Amoon, Min Huang, “*PGCRS: A Progressive Global Approach for Computation Routing and Scheduling in Computing Force Network*”, IEEE Transactions on Consumer Electronics. 10.1109/TCE.2025.3601811.
- 78) Ravi Kant Yadav, Sanjay Kumar Yadav, Maiejay Yadav, Rakhi Yadav, Achyut Shankar, Mohammed Amoon, “*Classification and feature extraction of text from hindi document for optical character recognition*”, International Journal on Document Analysis and Recognition (IJ DAR). 10.1007/s10032-025-00552-8.
- 79) Priyanka Das, Sangram Ray, Mou Dasgupta, Saru Kumari, Chien-Ming Chen, Mahesh Chandra Govil, Mohammed Amoon, “*Mutual Authentication and Trust Establishment (MATE) Protocol in VANET Using Puncturable Pseudorandom Function (PPRF): MATE-PPRF*,” IEEE Transactions on Intelligent Transportation Systems, Vol. 26(9), 2025, pp. 13293 - 13305.
- 80) Tao Zhang, Jiongchang Liu, Zeda Chen, Yeh-Cheng Chen, Mohammed Amoon, Saru Kumari, Xiaohan Liu, “*LAMNet: Fine-grained few-shot image classification with LLM-assisted multi-modal learning for urban biodiversity monitoring*,” Applied Soft Computing, Vol.181, 2025, pp. 113454.
- 81) Yanan Zhao, Yang Yang, Haiyang Yu, Saru Kumari, Mohammed Amoon, Sachin Kumar, Yilong Ren, “*Federated Learning Intersection Vehicle Trajectory Prediction Scheme Within Digital Twin*,” IEEE Transactions on Intelligent Transportation Systems. 10.1109/TITS.2025.3573999.
- 82) Chien-Ming Chen, Bohao Xiang, Zhigeng Pan, Mohammed Amoon, Kadambri Agarwal, “*Green Supply Chain Management for Digital Assets in the Metaverse: Leveraging Blockchain and AIoT*,” IEEE Internet of Things Journal, Vol. 12(19), 2025, pp. 39419 - 39432.
- 83) Xin Wang, Byung-Gyu Kim, Mohammed Amoon, Sachin Kumar, Zhonghua Liu, “*Federated Learning with Local Differential Privacy for Autonomous Electronic Vehicles: Enhancing Security and Performance*,” IEEE Transactions on Consumer Electronics, Vol. 71(2), 2025, pp. 6147 - 6157.

## RESEARCH PROJECTS & GROUPS

Project Title	Point of Support	Year
A Proposed Scheme for job scheduling on computational grids (Principal Investigator)	King Saud University	2009
Research group No. RGP-1436-035 (Member)	King Saud University	2015
Development of procedures for evaluation of learning outcomes and effective teaching (Project Representative)	King Saud University	2015
Development of creativity and innovation for university students (member)	King Saud University	2016

<b>Project Title</b>	<b>Point of Support</b>	<b>Year</b>
Classification and coding of government agencies in Saudi Arabia (Member)	King Saud University	2016
Research group No. RGP-1440-039 (Principal Investigator)	King Saud University	2018
Research group No. RGP-1441-456 (Member)	King Saud University	2020
Internet of Vision (IoV) based Crowd Administration of Hajj and Umrah Pilgrimage in Makkah and Madina (Principal Investigator)	Ministry of Education	2022
Research Project No. RSDP-968 (Principal Investigator)	King Saud University	2023 & 2024
Ongoing Research Funding Program ORF-2025-968 (Principal Investigator)	King Saud University	2025

## TEACHING EXPERIENCE

<b>No.</b>	<b>Course</b>	<b>Department</b>	<b>University</b>
1.	Advanced Programming (Python)	Computer Science and Engineering	King Saud University
2.	Basic Networking	Computer Science and Engineering	King Saud University
3.	Capstone Project (1)	Computer Science and Engineering	King Saud University
4.	Operating Systems Security	Computer Science and Engineering	King Saud University
5.	Policy, Legal, Ethics and Compliance	Computer Science and Engineering	King Saud University
6.	Cyber Threats	Computer Science and Engineering	King Saud University
7.	Visual Programming (JAVA)	Computer Science and Engineering	King Saud University
8.	Operating Systems Concepts	Computer Science and Engineering	King Saud University
9.	Database Administration	Computer Science and Engineering	King Saud University
10.	Data Structures	Computer Science and Engineering	King Saud University
11.	Fundamentals of Database Systems	Computer Science	King Saud University
12.	Interactive Media Design	Computer Science	King Saud University
13.	Internet Programming	Computer Science	King Saud University
14.	Introduction to Computers and Information Technology	Computer Science	King Saud University
15.	Principles of Computers	Computer Science	King Saud University
16.	Computer Networks	Computer Science	King Saud University
17.	Project for graduates	Computer Science	King Saud University
18.	Artificial Intelligence	Computer Science and Engineering	Menoufia University
19.	Software Engineering	Computer Science and Engineering	Menoufia University
20.	Advanced Databases	Computer Science and Engineering	Menoufia University
21.	Logic Design I	Computer Science	Menoufia University
22.	Logic Design II	Computer Science	Menoufia University

No.	Course	Department	University
23.	Computer Languages I(Java)	Computer Science	Menoufia University
24.	Computer Languages II(Java)	Computer Science	Menoufia University
25.	Digital Electronics	Computer Engineering	Tanta University
26.	Advanced Operating Systems	Computer Science	Modern Academy
27.	Internet Applications	Computer Science	Modern Academy
28.	Microprocessor Lab	Computer Science and Engineering	Menoufia University
29.	Image processing	Computer Science and Engineering	Menoufia University
30.	Computer organization	Computer Science and Engineering	Menoufia University
31.	Microelectronics Technology	Computer Science and Engineering	Menoufia University

## SKILLS DEVELOPMENT

No.	Course Title	Duration	Venue
1.	University Teacher Preparation	21 Days	Menoufia University-Egypt
2.	Effective Teaching Skills	6 Days	Menoufia University-Egypt
3.	Effective Communication Skills	4 Days	Menoufia University-Egypt
4.	Effective Presentation Skills	4 Days	Menoufia University-Egypt
5.	Scientific Research Skills	3 Days	Menoufia University-Egypt
6.	Profession Ethics and arts	3 Days	Menoufia University-Egypt
7.	Thinking Skills	3 Days	Menoufia University-Egypt
8.	Credited Hours	3 Days	Menoufia University-Egypt
9.	Time Management	3 Days	Menoufia University-Egypt
10.	Research Projects Management	3 Days	Menoufia University-Egypt
11.	Using Technology in Teaching	3 Days	Menoufia University-Egypt
12.	Research team Management	3 Days	Menoufia University-Egypt
13.	How to Compete for a Research Fund	3 Days	Menoufia University-Egypt
14.	International Publishing of Research	3 Days	Menoufia University-Egypt
15.	Strategic Planning	15 Hours	Menoufia University-Egypt
16.	People Management	15 Hours	Menoufia University-Egypt
17.	Taking Decisions and Problem Solving	15 Hours	Menoufia University-Egypt
18.	Management of Crises and Disasters	15 Hours	Menoufia University-Egypt
19.	Ethics of Scientific Research	15 Hours	Menoufia University-Egypt
20.	Skills of Mind Maps Usage	15 Hours	Menoufia University-Egypt
21.	The first Orientation program.	3 Days	King Saud University-Saudi Arabia
22.	Motivating Students to learn.	2 Days	King Saud University-Saudi Arabia
23.	E-Learning Design and Programming (Theory and practice)	3 Days	ELC & KSU-Saudi Arabia
24.	Developing a teaching Portfolio	2 Days	King Saud University-Saudi Arabia
25.	E-Learning Management (Blackboard)	1 Day	King Saud University-Saudi Arabia
26.	Course Lab	2 Days	ELC-Saudi Arabia
27.	Student Assessment and Classroom Management	2 Days	King Saud University-Saudi Arabia
28.	Micro Teaching "Application and Discussions"	2 Days	King Saud University-Saudi Arabia

No.	Course Title	Duration	Venue
29.	Using Adobe Photoshop for Image Manipulation	2 Days	King Saud University-Saudi Arabia
30.	Learning based on outcomes	2 Days	King Saud University-Saudi Arabia
31.	Internal audit for quality management systems (ISO 9001:2008)	2 Days	King Saud University-Saudi Arabia
32.	Supporting student learning	1 Day	King Saud University-Saudi Arabia
33.	Basics of Learning Management system	1 Day	King Saud University-Saudi Arabia
34.	Using Smart Class Room	2 hours	King Saud University-Saudi Arabia
35.	Learning theories	3 hours	King Saud University-Saudi Arabia
36.	Safe and comfortable and safe learning context	3 hours	King Saud University-Saudi Arabia
37.	Professional teaching competencies	3 hours	King Saud University-Saudi Arabia
38.	Feedback tool to a better learning	3 hours	King Saud University-Saudi Arabia
39.	International specification (ISO 9001:2008)	3 Days	King Saud University-Saudi Arabia
40.	Intensive study for international specification (ISO 9001:2008)	3 Days	King Saud University-Saudi Arabia
41.	The future of e-learning environments	2 Days	King Saud University-Saudi Arabia
42.	Key Performance Indicators and Benchmarking	2 Days	King Saud University-Saudi Arabia
43.	Provision of Quality Management System Data (KSU-QMS)	2 Days	King Saud University-Saudi Arabia
44.	Improving student learning	1 Day	King Saud University-Saudi Arabia
45.	Intellectual Property: Understanding and dealing with it	1 Day	King Saud University-Saudi Arabia
46.	Scientific Writing and Labeling Software	1 Day	King Saud University-Saudi Arabia
47.	Learning Through Problem Solving Strategy	1 Day	King Saud University-Saudi Arabia
48.	KSU Board of Assessors Course	9 Days	King Saud University-Saudi Arabia
49.	KSU Board of Assessors Refresher Course (2019)	1 Day	King Saud University-Saudi Arabia
50.	Intensive study for international specification (ISO 9001:2015)	3 Days	King Saud University-Saudi Arabia
51.	KSU Board of Assessors Refresher Course (2020)	1 Day	King Saud University-Saudi Arabia
52.	Quality assurance standards in university teaching	1 Day	King Saud University-Saudi Arabia
53.	Online tests in the learning management system (Blackboard)	1 Day	King Saud University-Saudi Arabia
54.	Assessing student performance in online learning	1 Day	King Saud University-Saudi Arabia
55.	Project Management Professional (PMP)	5 Days	King Saud University-Saudi Arabia
56.	Use of Google tools in education	1 Day	King Saud University-Saudi Arabia
57.	Best practice to secure your PC	4 Hours	King Saud University-Saudi Arabia
58.	Digital communications	5 Hours	King Saud University-Saudi Arabia
59.	Digital transformation in higher education institutions	5 Hours	King Saud University-Saudi Arabia
60.	Effective Negotiation Skills	4 Hours	King Saud University-Saudi Arabia
61.	Universal access and quality of life in the balance of international indicators	5 Hours	King Saud University-Saudi Arabia
62.	Building and managing a work team	5 Hours	King Saud University-Saudi Arabia
63.	Cloud Computing	5 Hours	King Saud University-Saudi Arabia
64.	Big data and its applications	5 Hours	King Saud University-Saudi Arabia
65.	Refresher course (KSU Board of Assessors)	5 Hours	King Saud University-Saudi Arabia
66.	Qualifying certified internal auditors	2 Days	King Saud University-Saudi Arabia
67.	Cybersecurity awareness	3 Hours	King Saud University-Saudi Arabia
68.	Ethical review of research projects	1 Day	King Saud University-Saudi Arabia
69.	Studying the needs of entities to prepare and implement the strategic plan	1 Day	King Saud University-Saudi Arabia
70.	Best practices for securing your personal computer	1 Day	King Saud University-Saudi Arabia

## RESEARCH INTERESTS

- Cybersecurity
- Blockchain
- Internet-of-Things (IoT)
- Healthcare computing systems.
- Cloud Computing.
- Green computing.
- Fog Computing.
- Distributed computing.
- Grid Computing.
- Resource scheduling.
- Fault-tolerant computing.
- Artificial intelligence.

## THESIS SUPERVISION

- Task Scheduling for Cloud Computing Systems, 2019.
- Fault Tolerance for Cloud Computing Systems, 2019.

## BOOKS TRANSLATION

I have translated four books from English into Arabic:

- Phonocardiography Signal Processing, 2015.
- Introduction to Intelligent Systems in Traffic and Transportation, 2016.
- Modern Systems Analysis and Design, 2017
- Cybersecurity Investments: Decision Support under Economic Aspects, 2020.

## ELECTRONIC COURSES DEVELOPMENT

I have developed the following electronic courses:

- Computer Networks.
- Data Structures.
- Advanced Java Programming.

## ADMINISTRATIVE COMMITTEES

- 1) Head of the Academic Advising Committee for the Department of Computer Science and Engineering, Applied Studies College, King Saud University, 2025/now.
- 2) Secretary general of the Promotion Committee, Department of Computer Science & Engineering, Applied Studies College, King Saud University, 2013/now.
- 3) Member of the team preparing the fourth standard (Students) of the self-study report (SSR) of the institutional academic accreditation renewal project for King Saud University, 2023/now.
- 4) Secretary general of the Standing Committee for feeding the computerized exam system with course descriptions, King Saud University, 2023/now.
- 5) Member of the committee to develop the executive plan for developing the community college and converting it into an applied college, King Saud University, 2020/now.
- 6) Quality Management Representative (QMR) for ISO 9001 at Riyadh Community College, 2009/now.
- 7) Member of college strategic plan updating and follow-up committee, King Saud University, 2018/now.
- 8) Member of the KSU Board of assessors, King Saud University, 2018/now.
- 9) Member of the internal auditing team, King Saud University, 2018/now.
- 10) Community Colleges representative in learning outcomes assessment committee, King Saud University, 2018/2021.
- 11) College representative of the project "Development of Creativity and innovation for college students of the university", 2015/2017.
- 12) Chair of the ISO Committee, Department of Computer Science, Community College in Riyadh, 2015/now.

- 13) College representative of the project “Procedures of Evaluation of Learning Outcomes and Effective Teaching”, 2014/2016.
- 14) Chair of the quality and academic accreditation Committee, Department of Computer Science, Community College in Riyadh, 2013/2015.
- 15) Chair of the Periodic Evaluation Committee, Department of Computer Science, Community College in Riyadh, 2010/2011.
- 16) Member of the college quality and academic accreditation Committee, Community College in Riyadh, 2012/now.
- 17) Member of the College Annual Report Committee, Community College in Riyadh, 2010/2011.
- 18) Member of the standard of governance and administration Committee, Community College in Riyadh, 2010/2011.
- 19) Chair of the Scientific Research Committee, Department of Computer Science, Community College in Riyadh, 2009/2012.
- 20) Co-Chair of the standard administrative structure Committee, Community College in Riyadh, 2009/2010.
- 21) Co-chair of the college committee for achieving the requirements for obtaining ISO 9001:2008, Community College in Riyadh, 2009/2010.
- 22) Member of the Award for Excellence in Teaching Committee, Community College in Riyadh, 2009/2010.
- 23) Member of the portal team, Community College in Riyadh, 2009/2010.
- 24) Member of the follow up Committee, Department of Computer Science, Community College in Riyadh, 2009/2010.
- 25) Member of the quality and academic accreditation Committee, Department of Computer Science, Community College in Riyadh, 2009/2010.
- 26) Coordinator of the principles of computer and Information Technology course (110CSR), Department of Computer Science, Community College in Riyadh, 2009/2010.
- 23) Member of the Academic Advising Committee, Department of Computer Science, Community College in Riyadh, 2009/2010.
- 24) Member of the Committee to evaluate Projects of graduated students, Department of Computer Science, Community College in Riyadh, since 2008.
- 25) Member of the Computer Science Department council, Community College in Riyadh since 2007 until now.
- 26) Member of the committee for preparing time tables, Community College in Riyadh, 2007-2008.
- 27) Member of the Supervisory Committee on the website of the Department of Computer Science since 2007 until now.
- 28) Member of the Supervisory Committee on the College web site in 2007-2008.
- 29) Committee member responsible for the creation and revision of Back links to the web sites of the Community College in Riyadh, 2009.
- 30) Member of the Computer training committee, the University of Menoufia in 2006-2007.
- 31) Member of the Supervisory Committee to establish the ICDL Lab, Faculty of Electronic Engineering, University of Menoufia in 2006-2007.
- 32) Secretary-general of the Sports committee of the students Federation, Faculty of Electronic Engineering, University of Menoufia in 2006-2007.
- 33) Board Member of the Information Technology club, Faculty of Electronic Engineering, University of Menoufia from 2001 to 2004.

## TECHNICAL AND PROFESSIONAL COMMITTEES

Committee	Date	Contribution
King Saud University Board of Assessors	Since 2018	Member
Editorial board of Journal of data mining and Information Retrieval	Since Dec. 2012	Editor
Computer Science and Information Systems Journal (ComSIS).	since 2009	Member of the Technical Committee
World academy of science, engineering and technology.	since 2006	Member of the Technical and Research Committee and the Editorial Board

International Conference on Computational Intelligence for Modelling, Control and Automation (CIMCA 2008)	2008	Member of the Technical Committee
International Journal of Cognitive Informatics and Natural Intelligence (IJCINI).	since 2008	Member of the Technical Committee
The 17th IFAC World Congress Conference (IFAC WC).	2008	Member of the Technical Committee
The journal of IEEE Potentials.	since 2006	Member of the Technical Committee
The 5th IEEE International Conference on Cognitive Informatics ICCI.	2006	Member of the Technical Committee
International Conference on Computational Intelligence for Modelling, Control and Automation-CIMCA06 Jointly with International conference on Intelligent Agents, Web Technologies and Internet Commerce IAWTIC06	2007	Member of the Technical Committee
Egyptian Engineers Syndicate	Since 1996	member
Saudi Association of Community Colleges	Since 2010 to 2015	Board member

## WORKSHOPS

- 1) *Microsoft Operating Systems advances workshop* held at the Smart village, Cairo 2006 (One day).
- 2) *Microsoft Software Developers workshop* held at the International Conferences Center, Cairo 2006 (Three days).
- 3) *Oracle Structured Query Language (SQL) Workshop* held at ORASCOM Egypt during March 2007 (Five days).
- 4) *Oracle Procedural Language/Structured Query Language (PL/SQL) Workshop* held at ORASCOM Egypt during April 2007 (Five days).
- 5) *Oracle Forms Developer Workshop* held at ORASCOM Egypt during April 2007 (Five days).
- 6) *Oracle Reports Developer Workshop* held at ORASCOM Egypt during June 2007 (Five days).
- 7) *Design e-learning software Workshop* held at King Saud University during January 2009(Two days).
- 8) *Advanced Technologies Forum 2009* organized by KACST 26-28 April 2009 in Riyadh.
- 9) *Quality and its applications in high education workshop* at king Saud University during 26-27 May 2009.
- 10) *1st RTV Energy Workshop (Towards a National Initiative for Future Development)* at king Saud University in 25/2/2010.
- 11) *Information Technology Future Day* at King Saud University in 1/3/2010.
- 12) *Uploading courses to the Blackboard* at King Saud University in 15/10/2012.
- 13) *Educational design of E-learning* at King Saud University in 10/1/2013.
- 14) *Development tools for electronic courses* at King Saud University from 9/3/2013 to 13/3/2013.
- 15) *Design of electronic courses* at King Saud University from 16/3/2013 to 20/3/2013.
- 16) *Quality and faculty workshop* at community College-King Saud University from 6/10/2013 to 9/10/2013.
- 17) *University Restructuring* at King Saud University in 30/10/2013.
- 18) *The future of e-learning environments* at King Saud University in 17-18/9/2014.
- 19) *Investigating ISO 9001:2015* at King Saud University in 18/11/2015.
- 20) *Preparation of tests in light of quality requirements* in 20/3/1438H
- 21) *Preparation of the course report* in 4 /4/ 1438H.
- 22) *The strategic plan* 19/1/1438H.
- 23) *Vision, mission and goals* in 1/2/1438H.
- 24) *Assessment of learning outcomes* 14/2/1438H.
- 25) *Quality Control for programs* 20/2/1438H.
- 26) *To recognize the mission of the university and the role of everyone in the college to achieve it* in 27/2/1438H.
- 27) *Emerging technologies in new libraries and their impact on scientific publishing*, Nasseg Academy, 03/11/2021.
- 28) *Renewal of the second institutional academic accreditation for the university 2024*, King Saud University, 28/02/2023.

- 29) Refresher workshop for the university's accredited auditors' board, King Saud University, 06/03/2023.
- 30) Unleashing innovation and learning: Utilizing the Makerspace environment within STEM applications, Nasseg Academy, 30/08/2023.
- 31) Building virtual libraries and classrooms to support the distance learning process, Nasseg Academy, 09/01/2024.
- 32) How to write a self-study report for academic accreditation purposes, Nasseg Academy, 20/03/2024.
- 33) Libraries of the Future: Experiences from Our Arab World, Nasseg Academy, 15/05/2024.
- 34) Digital identity: sources of opportunities and challenges, Nasseg Academy, 08/01/2025.
- 35) Roadmap for Arab universities towards the jobs of the future, Nasseg Academy, 16/04/2025.
- 36) Cybersecurity from an educational perspective, Nasseg Academy, 17/09/2025.
- 37) Skills and techniques for designing a personal brand for the scientific researcher - an insider's perspective, Nasseg Academy, 29/10/2025.

### **Letters of thanks and appreciation**

- Three certificates of appreciation from Deanship of Scientific Research for publishing in in Top 10% journals
- Three certificates of appreciation from Deanship of Scientific Research for publishing in in Top 5% journals.
- Certificate of appreciation from the President of King Saud University for participating in the renewal of the university's second institutional accreditation.
- A letter of appreciation from the Vice President of King Saud University for Educational and Academic Affairs for the service as Assistant to the Advisor to the Vice President for E-Learning during the academic year 2023-2024.