Curriculum Vitae

Professor Afaq Ahmad

A. Personal Information

Afaq Ahmad

Professor, Department of Mathematics and Computer Science Modern College of Business and Science, Muscat, Oman **Contact Information:** Cell: [+968 98939463] Email: [afaq.ahmed@mcbs.edu.om] **Language:** English (Fluent in Reading, Writing, Speaking, and Comprehension) **Marital Status**: Married (Three Adult children)

B. Professional Summary

- Building on a 45+ years teaching, research and university & community service career at university education level. Outstanding record of accomplishment in assuring student success through teaching, advising, tutoring, coaching and career path guidance.
- Seasoned in conceiving and building programs from the ground up through proven competencies in course design, administration, staff development and recognizing talent & empowerment. Takes pride in developing and implementing special programs for special needs students.
- With highly acquired knowledge, skills, attitudes and interest in improving education, and gained attire experience with accreditation processes and /or quality improvement processes.
- Effective communicator with excellent planning, organizational and negotiation strengths as well as the ability to lead, reach consensus, fight entropy, establish goals and attain results.

C. Education

- **Ph. D.** (1990) Computer Engineering, Electronics and Computer Engineering Department. Indian Institute of Technology (IIT), Roorkee, India.
- PG Diploma, Labor Law, Labor Relations and Industrial Organization (1980), Faculty of Law, AMU, Aligarh, India.
- MSc. Eng. (1977) Electronics Engineering, Electrical Engineering Department, Faculty of Engineering, Zakir Hussain College of Engineering & Technology, AMU, Aligarh, India.
- BSc. Eng. (1974) Electrical Engineering, Electrical Engineering Department, Zakir Hussain College of Engineering & Technology AMU, Aligarh, India.

D. Academic Experience

Modern College of Business and Sciences (MCBS), Muscat, Oman

- Full Professor, Department of Mathematics and Computer Science May 5, 2024 – Present
- **Bestowed Honorary Professorship, School of Information Technology, Amity University, India** March 15, 2024 – Lifelong

Sultan Qaboos University (SQU), Muscat, Oman

- Full Professor, Electrical and Computer Engineering Department, College of Engineering May 19, 2015 – January 31, 2024
- Associate Professor, Electrical and Computer Engineering Department, College of Engineering June 3, 2001 May 18, 2015
- Assistant Professor, Information Engineering Department, College of Engineering April 1, 1998 – June 2, 2001
- Lecturer, Electrical and Electronics Engineering Department, College of Engineering September 3, 1992 – March 31, 1998

Aligarh Muslim University (AMU), Aligarh, India

• Associate Professor (Reader), Electronics Engineering Department, Faculty of Engineering, College of Engineering

February 1, 1988 – September 2, 1992

• Lecturer, Electrical Engineering Department, Faculty of Engineering, College of Engineering February 1, 1980 – January 31, 1988

Other Academic and Research Experience

1

- Senior Research Fellow, Council of Scientific & Industrial Research (CSIR), India December 17, 1977 January 31, 1980
- Lecturer, Electrical Engineering Department, National Institute of Technology (NIT), Srinagar, India August 23, 1977 December 15, 1977
- Consultant Engineer, Light & Co (E & A) Private Limited, India April 1, 1976 August 20, 1977
- Junior Research Fellow, University Grants Commission, India January 1, 1974 March 31, 1976

E. Academic and Administrative – Appointments & Nominations

- Extensive experience in university, college, and departmental leadership roles.
- Broad involvement in committees spanning academic, research, accreditation, and student affairs.
- Strong focus on promoting academic excellence and fostering international relations.
- (a) At Modern College of Business & Science, Muscat, Oman. [May 5, 2024 till date]

Accreditation & Committee Involvement

With extensive experience in accreditation processes, I have actively contributed to various committees, playing key roles in enhancing departmental and program development efforts.

- **Coordinator, Departmental Faculty Professional Development & Web Committee** Continue to lead faculty development initiatives and managing web-related activities to promote seamless communication and professional growth across the department.
- **Member, Research Committee** Contributing to the strategic direction, planning, and evaluation of research initiatives, supporting the department's mission to advance academic research.
- **Member, IEEE Conference & IEEE Young Professionals Gathering 2024** Playing an active role in organizing and participating in the future IEEE Conference and Young Professionals Gathering, fostering engagement with industry leaders and expanding professional networks.
- **Committee Member, ABET Accreditation** Supporting the accreditation process for undergraduate programs, ensuring compliance with ABET standards and contributing to program improvements.
- Member & Coordinator, UG & PG Program Development Committee Collaborating in the design and development of new undergraduate and postgraduate programs and curricula, ensuring alignment with current industry trends and educational standards.

(b) At Sultan Qaboos University (SQU), Muscat, Oman. [Sept. 3, 1992 – Jan. 31, 2024]

University-Level Appointments & Nominations

- Member, Academic Promotion Appeal Committee (APAC) [2019-2020]
- Member, Academic Promotion Committee, College of Economics and Political Science [2018-2019]
- Member, Liaison Committee (with Computer Engineering and Science and Information System Departments) [2009-2023]
- Mock Visit Candidate, Oman Academic Accreditation Authority (OAAA) Visit Preparation [Feb. 2018]
- Member, ABET Steering Committee, College of Science (Computer Science Dept.) [2014-2017]
- Nominated Member, Various University Committees, including:
- English, Safety, Library and Textbooks, Computer, Postgraduate Studies, Examination, Timetabling, Interview Board for Demonstrators, Technical Staff, Research, Students' Information System (SIS), and Petroleum Development of Oman (PDO) Liaison.

Department-Level Appointments

- Assistant Head, Electrical and Computer Engineering Dept. [2007-2015]
- Acting Head, Electrical and Computer Engineering Dept.
- Acting Head, Information Engineering Dept.
- Acting Head, Electrical and Electronics Engineering Dept.
- Secretary, Departmental Board [1994-1997]
- Nominated Member, Various Departmental Committees, including:
- o Chair, Curriculum Committee [2005-2015; 2002], Member [2016-2023; 2003-2004; 2001; 1992]
- Chair, Computer Systems and Networks Specialization [2016-2022]
- Member and Rapporteur, Promotion Committee [2018-2022; 2015; 2004-2007]
- Chair, Students' Specialization Allocation Committee [2006-2023]
- Chair, Advising/Probation Advising Committee [2007-2023], Member [2005-2007]

1

- Chair, Student-Staff Liaison Committee [2007-2015]
- Member, Budget Committee [2016-2023]
- Member, Strategic Planning & Development Committee [2006-2012]
- o Chair, Sub-Committee for International Relations, Member, ABET Accreditation Committee [2015-2021]
- Member, ABET Accreditation & Curriculum, Timetabling & Examination Committees [2003-2015]
- Chair, Petroleum Development of Oman (PDO) Equipment Donation Ad-hoc Committee [2012]
- Member, Work Plan Implementation Ad-hoc Committee [2009-2012]
- Chair, Academic Affairs Committee [1996-1998], Member [1999-2001]
- Chair, Examination Committee [1996-2005], Member [2006-2011]
- Chair, Timetabling Committee [1996-2015], Member [1993-1995]
- o Chair, Postgraduate Studies & Research Committee [2002; 2006], Member [1998-2001; 2005; 2007-2008]
- o In Charge, Digital Systems Laboratory [2005-2021]
- o Member, Recruitment Committee [2001]
- Member, Seminar Committee [1993-1995]
- Member, Lab Upgrading Committee [1998-1999]
- Member, Library and Textbooks Committee [1993-1996]
- Member, Safety Committee [1995-1997]

(c) At Aligarh Muslim University (AMU), Aligarh, India. [1980 -1992]

University-Level Positions:

- Assistant Dean, Student Welfare
- Assistant Proctor
- Acting Provost, Halls of Student Residential Centers
- Warden In-Charge / Warden / General Warden / Dining Hall In-Charge / Sports Hall In-Charge of Student Hostels
- President, University Games Committee (Various Clubs)
- Counselor, University Coaching and Guidance Center
- Coordinator, National Social Service Scheme
- Assistant Superintendent, University Examination Body
- University Result and Transcript Scrutinizer
- Member, Team for Switching to Computerized Processing of University Admissions
- Member, Team for Conducting Elections of University Court, Students' Union, and Staff Club Office Bearers
- Member, University Convocation Arrangements Committee
- Member, Team for Creation of Computer Engineering Department
- Member, Team for Developing MCA Program
- Member, Team for Creation of Electronics Department
- Member, Inter-Disciplinary Forum (for interdisciplinary research studies)

Faculty & College-Level Positions (Zakir Hussain College of Engineering & Technology):

- Member, Faculty Board
- In-Charge, Engineering Student Excursion Tour
- Nominated Member, College Committees: Book Bank, Exhibition, Sports, and Cultural Committees

Department-Level Positions:

- In-Charge, Computer Lab
- Auditor, Circuit's, Signal and System's, and Measurement's Labs

(d) At IIT, Roorkee, India. [1986 -1989]

• Member Advisory Committee Quality Improvement Program

F. RECOGNITIONS, AWARDS AND HONORS:

(More than 65, including Bestowed Honorary Professorship - School of Information Technology, Amity University, India): A summary, which highlights the key awards and recognitions that I received, showcasing my leadership, speaking roles, contributions to research, and educational impact is provided below.

- Keynote Speaker & Moderator and Chair of Technical Sessions: at numerous international conferences, globally including IEEE, and IEEE Oman Section events (1988-2024).
- **Service & Leadership Awards**: Recognized for leadership as Founding Chair of IEEE SIGHT Oman (2023) and contributions to IEEE, Sultan Qaboos University, and various international organizations (1990 -2024).
- **Excellence in Research**: Received multiple Best Paper and Certificate of Excellence awards, including the current one, the IEEE conference (2023) for a paper on memory compiler performance.

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- Workshop & Educational Contributions: Acknowledged for conducting workshops on research skills, methodology, and curriculum development at institutions globally. In Oman such as Walajat College, Sultan Qaboos University, National University of Science and Technology, Modern College of Business & Science, University of Science and Technology and Global Technical College (2009-2024).
- **Long-standing Contributions**: Awarded for distinguished service in academic roles at Sultan Qaboos University (1992-2024) and other institutions, including recognition for ABET accreditation efforts

G. Professional Affiliations

- IEEE: Senior Member (Computer Society, Humanity Activity Committee, SIGHT), USA
- IETE: Life Fellow Member (India)
- SSARSC: Life Fellow Member (India)
- SSI: Life Member (India)
- ISIAM: Life Member (India)
- IACSIT: Senior Member (Singapore)
- UACEE: Fellow Member
- IAENG: Member (USA)
- WSEAS: Honorary Member
- WASET: Member
- NYAS: Active Member
- Enformatika Society: Honorary Member
- SciTech Med: Honorary Member
- SQU & Other Research Collaborations: Member of various interdisciplinary research groups
- AMU Alumni: Life Member, Donor Member
- SQU Staff Club: Member (1992-2024)

Biographical Listings

• Listed in "Asian/American Who's Who", "Biography Today", "One Thousand Great Scientists 2001", "Reference Asia", and "Who's Who" (Indian Biographical Institute).

H. Professional Recognition - Keynote and Invited Speaker (More than 33 in numbers)

- **2024**: "Need to Infuse Early Cybersecurity Education in Schools" Keynote, IEEE 11th Int'l Conference on Reliability, Infocom Technologies, and Optimization (ICRITO'2024), Amity University, Noida, India.
- **2022**: "On Reducing Power during Test Process of FPGAs" Keynote, IEEE 10th Int'l Conference on Reliability, Infocom Technologies, and Optimization (ICRITO'2022), Amity University, Noida, India.
- 2022: "Bit Swapped Test Technique for EVS Applications" Keynote, IEEE 9th Int'l Conference on Signal Processing and Integrated Networks (SPIN 2022), Amity University, Noida, India.
- 2022: "Digital Circuit Testing and Scan Circuitry on FPGA" Keynote, IEEE Int'l Mobile and Embedded Technology Conference (MECON-2022), Amity University, Noida, India.
- **2021**: "New Paradigms of Research in Image Processing, AI, and IoT" Keynote, IEEE 9th Int'l Conference on Reliability, Infocom Technologies, and Optimization (ICRITO'2021), Amity University, Noida, India.
- 2021: "Optimum Programmable CRC Implementation on FPGA" Keynote, IEEE 8th Int'l Conference on Signal Processing and Integrated Networks (SPIN 2021), Amity University, Noida, India.
- **2020**: "Power Energy, Environment, and Intelligent Control" Keynote, International Conference, India.
- 2020: "Trends and Future Directions" Keynote, IEEE ICRITO 2020, Amity University, Noida, India.
- 2020: "Telemedicine and AI in Medicine" Keynote, ISTAIM 2020, Sultan Qaboos University, Muscat, Oman.
- **2019**: "Artificial Intelligence" Keynote, IEEE Amity International Conference on Artificial Intelligence (AICAI 2019), Amity University, Dubai.
- 2018: "Trends and Future Directions in ICRITO" Keynote, IEEE ICRITO 2018, Amity University, Noida, India.
- 2018: "Recent Trends in Computing in Mathematics and Information Technologies" Keynote, Vijnana Parisad of India Conference, Bundelkhand University, India.
- **2017-2016**: Keynote speaker at various IEEE and international conferences on topics including signal processing, technology, and optimization in Dubai, India, and Oman.
- Additional notable invited talks include conferences on AI, signal processing, and digital image processing (2005–2024).

I. Professional Recognition - Program Evaluator/ Reviewer/ Examiner

• External Reviewer, Oman Academic Accreditation Authority (OAAA), 2018–Present.

- External Examiner, College of Engineering, Sohar University, Oman, 2019 & 2016.
- Advisory Board, Global College of Engineering & Technology, Oman, 2021-2023.
- External Evaluator, Electrical Engineering Program, Walajat College, Oman, 2015.
- **External Evaluator**, Accrediting Council for Independent Colleges and Schools (ACICS), USA, 2018–Present.
- Academic Promotions Evaluator for various institutions, including:
 - Sohar University, A 'Sharqiyah University, Dhofar University, Gulf College, Zahra College (Oman)
 - o King Abdul-Aziz University (Saudi Arabia), Al-Balqa Applied University, Mutah University (Jordan)
 - o Jadara University, Kuwait University, Australian College of Kuwait.
- **Promotion Interview Board Committee**, Sohar University, Oman, 2023.
- J. **Professional Recognition Chairing Technical Sessions** (More than 35 in numbers)

K. Teaching

TEACHING PHILOSOPHY & GOALS

My teaching philosophy centers around fostering an engaging and supportive learning environment. I am committed to:

- Encouraging continuous improvement: presenting theories and techniques in a manner that promotes constant growth and development.
- Creating an anxiety-free atmosphere: helping students feel comfortable and confident, allowing them to think critically and develop their abilities.
- Providing holistic support: Assisting students both inside and outside the classroom to enhance their technical skills and academic performance.

TEACHING EXPERIENCE SUMMARY

Since beginning my teaching career in 1977 in India, and continuing at Sultan Qaboos University (SQU) since 1992, I have consistently prioritized teaching as my main responsibility. Over the years, I have taught a wide range of courses at both undergraduate and graduate levels, focusing on core concepts in electrical and computer engineering. Courses Taught at Sultan Qaboos University

I have taught various courses in the Departments of Electrical Electronics, Information Engineering, Electrical Engineering, and Electrical, Computer Engineering, and Computer Science across both undergraduate and postgraduate programs. My responsibilities include:

- Classroom teaching and conducting lab sessions
- Organizing tutorials, mini-projects, and seminars
- Engaging in research paper discussions and grading assignments
- Managing course websites and maintaining office hours for student support

COURSE	Course	Course
Cryptography & Authentication	Digital Logic Design	Signals and Systems
Computer Architecture & Organization	Engineering Management & Economics	Software Engineering
Digital Image Processing	Embedded Systems	Digital Electronics & Reliability
Engineering Design & Professional Skills	Fault-Tolerant Computing Systems	Artificial Intelligence
FPGA - Advanced Logic Design	Circuit Analysis I	Microprocessor Interfacing
Digital Systems & Microprocessors II	Data Encryption & Coding	Digital Systems II
Microprocessors & Microcomputers	Advanced Logic Design	Computer Aided Tools
Computing Skills	Mathematical System Theory	FORTRAN Programming
Modern Programming Techniques	Seminar & Field Work II	Analog & Digital Circuit Lab
Electro-technology	Advanced Computer & Control Lab	Machine & Computer Lab
Measurement Lab	Electronics & Measurement Lab	Microprocessors & Comm. Lab
Signals & Systems - MATLAB Approach	Intro. to Visual Basic Programming	Electronic Workshop
Senior UG Projects	MS Projects (PG)	MS Dissertation and Thesis (PG)
Switching Theory (PG)	Linear System Theory (PG)	Directed Studies (PG)
Adv. MATLAB in Electrical & Computer		Adv. Reliability & Fault-Tolerant
Engineering Applications (PG)		Systems (PG)

L. Supervision Work: Throughout my academic career, I have actively supervised and mentored students at various levels, including Bachelor's, Master's, and Ph.D. programs. Below is a summary of my supervision records. The experience reflects my continuous involvement in academic supervision and evaluation across various disciplines and levels.

- BSc Eng. (Senior Projects): 89 completed (Mainly supervision)
- MSc Eng. (Projects/Theses): 29 completed (Mainly supervision)
- MCA (MPhil/Dissertations): 3 completed
- Ph.D. (Theses partial): 4 (1990-92, 2004-07, 2015-17, 2023-2024)
- Ph.D. (Theses Examining/Evaluating): 18
- MS (Theses Examining/Evaluating): 27
- Research Assistants & Associates: 12
- Technical Staff/Teaching Assistants: 21
- Trainees: 25
- **M. Curriculum, Course and Laboratory Development**: These contributions summarized below reflect my commitment to maintaining cutting-edge curriculum and laboratory facilities.

As Chair of the Curriculum Committee at SQU, I played a key role in developing and revising undergraduate and postgraduate programs, ensuring they met the needs and standards of the Sultanate of Oman. I contributed to drafting new program proposals, preparing degree plans, auditing course data sheets, and supporting ABET and OAAA accreditation processes. Notably, I assisted in the ABET accreditation of the Computer Science program in 2017. Throughout my 44-year teaching career, I have continuously updated course materials and teaching methodologies, introducing new courses and software to keep up with global engineering standards. Additionally, I've developed several innovative laboratories, including:

- Advanced Logic Design and Computer Interfacing Lab (using ALTERA FPGA kits)
- Digital Logic Design Lab (using Logisim FOSS)
- FORTRAN Programming Lab (using Geaney FOSS)
- Fault-Tolerant Computing Lab (in-house simulator)
- Microprocessor Interfacing Labs (8086, 8088 and 8085 microprocessors)

N. Advising

I have extensive experience of advising. As an advisor, I pay my attention to my advisees and help to guide them accordingly in critical situations. For good students I used to write recommendation letters for extra loads. I motivate my advisees for selection of majors, minors with careful thoughts interests. I always keep track of probation students for their performance through the instructor's feedback. If I find appropriate, I used to refer my advisees for counseling. I believe and feel my advisee are at very critical of age that needs proper guidance and advice. For graduating students, I teach them how to prepare an effective CV and how to apply for technical positions in the industry or to academia itself. Chaired for the long period the Pre-Specialization Academic Advising Unit (PAAU) of College of Engineering at SQU as well as the Probation Advisory Committee.

0. Teaching Activities outside the Classroom

I have conducted various workshops and short courses outside the classroom, focusing on research skills, digital design, and advanced engineering topics. Notable sessions include workshops on Research Skills and Methodology at NUST (2022) and Researchers' Skills Development at SQU (2023), as well as technical workshops on Digital Image Processing, FPGA-based digital design, and Verilog HDL at SQU and other institutions. I have also presented tutorials on Linear Feedback Shift Registers at IEEE-MTV, Austin, USA.

P. Scholarly Achievements

My recent work extends to cybersecurity, where I focus on the design and implementation of secure systems, cryptographic algorithms, and threat detection mechanisms within digital systems and networks. Furthermore, I am deeply involved in artificial intelligence (AI), applying AI techniques to optimize system design, enhance fault detection, and improve data-driven decision-making.

In the realm of digital image processing, my research explores advanced techniques for image enhancement, segmentation, and analysis, with applications in medical imaging, computer vision, and security.

My research spans a variety of cutting-edge topics, including VLSI testing, fault diagnosis, and digital system testing, utilizing Built-In Self-Test (BIST) and Design for Testability (DFT) approaches. I also focus on fault-tolerant computing, coding theory, and error-correcting codes, combining both theoretical analysis and practical applications. Additionally, my work covers algorithm design, translation, and implementation, along with the development of low-cost educational software, tools, and simulators.

I specialize in FPGA design and Verilog-HDL, along with the theory and diverse applications of Linear Feedback Shift Registers (LFSR). Another key area of my research involves mathematical morphological applications across various engineering fields.



Most of my published papers are indexed in reputable databases such as ISSN/ISBN, with several papers appearing in high impact referencing sources like Scopus, Engineering Village, IEEE Xplore, Thomson Scientific ISI, and Google Scholar.

My scholarly achievements are categorized as

- 1. Journal Papers Total: 87.
- 2. International Conference Proceedings Total: 135.
- 3. Books Total: 1.
- 4. Book Chapters Total: 15.
- 5. Articles Total: 33.
- 6. Posters Total: 9.
- 7. Technical Reports Total: 15.
- 8. Lab Manuals Total: 27.
- 9. Lecture Notes Total: 24.

Google Scholar (Dec. 2024)

Citations: 1272 <u>h-index</u>: 23 <u>i10-index</u>: 44

ResearchGate (Dec. 2024)

Research Interest Score: 1218 Citations: 1719 <u>h-index</u>: 25

A Subset of Publications: [J - Journal, C - Conference, BC – Book Chapter]

- BC **Afaq Ahmad**, Sayyid Samir Al Busaidi, Mohamed Yoosef and Basant Kumar (2025 Accepted): Advances in image processing, reliability, and artificial intelligence Data centered techniques and applications in edge computing **(Ch.** Reliability and risk prevention in image processing), [Elsevier-Scopus].
- C1 Karimulla Syed, Amer Hamza Yousuf, Murali Krishna Boddu, Sai Sing, Mahaboob Shareef Syed and Afaq Ahmad (2025): Predicting power output of solar photovoltaic panels using machine learning techniques, 2025 Int'l Conference for Artificial Intelligence, Applications, Innovation and Ethics (AI2E), Sultan Qaboos University, Oman, Feb. 3-5, 2025. [IEEE Xplore].
- C2 Basant Kumar, Mohammed Mueen Pasha, Sandeep J., Vijaya P., Afaq Ahmad and Mani Joseph (2024): Blockchain in Drone Systems: Advancements, Security Implications and Community Acceptance, Int'l Conference on Sustainable Practices in Business and Technology (ICSPBT'2024), Modern College of Business and Science, Oman, Dec. 11-12, 2024. [Springer-Scopus].
- C3 Afaq Ahmad, Mohammad Sultan Ahmad Ansari, Muhammad Naeem, Mohamed Sirajuddin Yoosuf and Bashir Ahmad Fida (2024): Challenges towards sustainable future of electric vehicle, Int'l Conference on Sustainable Practices in Business and Technology (ICSPBT'2024), Modern College of Business and Science, Oman, Dec. 11-12, 2024. [Springer-Scopus].
- C4 Afaq Ahmad, Mani Joseph, Basant Kumar, Vijaya P. and Hothefa Shaker (2024): Sustainable cryptographic keys using LFSRs models, Int'l Conference on Sustainable Practices in Business and Technology (ICSPBT'2024), Modern College of Business and Science, Oman, Dec. 11-12, 2024. [Springer-Scopus].
- C5 Mohammad Sultan Ahmad Ansari, Afaq Ahmad, Henry Karyamsetty, Alfadhal Almaskari and Venkat Ram Raj Thumiki (2024): Business sustainability, sustainable planning, operational efficiency, and the role of emerging technologies, Int'l Conference on Sustainable Practices in Business and Technology (ICSPBT'2024), Modern College of Business and Science, Oman, Dec. 11-12, 2024. [Springer-Scopus].
- C6 P. Vijaya, Mohamed Sirajuddin Yoosuf, Basant Kumar, Joseph Mani, Hothefa Jassim and Afaq Ahmad, (2024): Eel and grouper weighted moving average enabled SpinalZFNet for startup success prediction, Int'l Conference on Sustainable Practices in Business and Technology (ICSPBT'2024), Modern College of Business and Science, Oman, Dec. 11-12, 2024. [Springer-Scopus].
- J1 Hafiz M. Asif, Mohamed Abdul Karim Sadiq, Firdous Kausar and **Ahmad**, **A**. (2024): **Empirical analysis of critical thinking in electrical engineering and computer science courses**, Journal of Engineering Education Transformations (JEET), vol. 37, no. 4, pp. 85-93. [Scopus].
- J2 Syed Aqeel Ashraf, Ch. Venkateswara Rao, Khaliquzaman Khan, Mohammad Mohatram, Afaq Ahmad and Ch. Ramya (2024): Strategic rout for impending green hydrogen energy in Oman, E3S Web of Conferences 472, 01011, pp 1-12.
- C7 S. Hussain, M. A. Raheem and A. Ahmad (2023): Memory compiler performance prediction using recurrent neural network, IEEE Int'l conference, Devices for Integrated Circuit (DevIC), Kalyani, India, 7-8 April, pp. 490-495. [IEEE Xplore-Scopus].



- C8 **A. Ahmad** (2022): **On reducing power during test, process of FPGAs**. 10thInt'l Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO), 13-14 Oct., pp. 1-5. [IEEE Xplore-Scopus].
- J3 **Afaq Ahmad**, Sayyid Samir Al Busaidi (2022): **Fault diagnosis and fault tolerance**, Emerging Methodologies and Applications in Modelling, System Assurances, pp. 307-321. ISBN 978-0323902403. [Elsevier-Scopus].
- J4 Shaik Mazhar Hussain, Kamaludin Mohamad Yusof, Afaq Ahmad and Shaik Ashfaq Hussain (2022): Integration of wireless communication technologies in internet of vehicles for handover decision and network selection, Emerging Methodologies and Applications in Modelling, System Assurances, pp. 547-561. ISBN 978-0323902403. . [Elsevier-Scopus].
- J5 Hussain, S.M., Yusof, K.M., Asuncion, R., Hussain, S.A. and Ahmad, A. (2022): An integrated approach of 4G LTE and DSRC (IEEE 802.11p) for internet of vehicles (IoV) by using a novel cluster-based efficient radio interface selection algorithm to improve vehicular network (VN) performance, Sustainable Advanced Computing. Lecture Notes in Electrical Engineering, Springer (Singapore), vol. 840, pp. 569-583. ISBN 978-9811690129, 978-9811690112. [Springer-Scopus].
- C9 S. Hussain, M. A. Raheem and A. Ahmad (2021): SIC-TPG for path delay fault detection in VLSI circuits using scan insertion method, IEEE Int'l conference, Devices for Integrated Circuit (DevIC), Kalyani, India, 19-20 May, pp. 284-288. [IEEE Xplore-Scopus].
- J6 M. U. Bokhari, M. A. Siddiqui and **A. Ahmad** (2021): Integration of testing effort function into delayed s-shaped software-reliability growth model with imperfect debugging a proposed Bokhari model, Springer Journal Operations Research Forum, vol. 2, Issue 4 (56), pp. 1-23. [Springer-Scopus].
- J7 M. U. Bokhari, M. K. Adhami and **A. Ahmad** (2021): **Evaluation of news search engines based on information retrieval models**, Springer Journal Operations Research Forum, vol. 2, Issue 3 (41), pp. 1-22. [Springer-Scopus].
- J8 Shaik Ashfaq Hussain, Kamaludin Mohamad Yusof, Shaik Mazhar Hussain and Afaq Ahmad (2020): DSRCMAC Protocolsin connected vehicles - a review, Int'l Journal of Advanced Science and Technology (IJAST), vol. 29, No. 7, pp. 12536-12545. [Scopus].
- J9 A. Ahmad, A. Al-Maashari, M. H. Al-Mansoori and A. Abdulghani (2020): Working in a switched framework of ABET criteria 3 (a-k) student outcomes into the changed (1-7) student outcome, SSRN Electronic Journal, pp.1-6. [Springer-Scopus].
- C10 A. Ahmad (2020): Automotive semiconductor industry trends, safety and security challenges, 8th Int'l Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO 2020), Amity University, Noida, India, 4-5 June, pp. 1373-1377. [IEEE Xplore-Scopus].
- C11 Osman Elgawi, A. M. Mutawa and **Afaq Ahmad** (2019): **Energy-efficient embedded inference of SVMs on FPGA**, 2019 IEEE Computer Society Annual Symposium on VLSI, Miami, Florida, USA, July 15-17, pp.164-168. [IEEE Xplore-Scopus].
- C12 Ahmad, A. (2019): Reliable and fault tolerant systems on chip through design for testability, IEEE Amity Int'l Conference on Artificial Intelligence (AICAI'19), Amity University, Int'l Academic City, Dubai, UAE, Feb. 4-7, pp. 50-53. [IEEE Xplore-Scopus].
- J10 Pullayikodi S. K., Tarhuni N., **Ahmad A.** and Bait Shiginah F. (2018): Performance evaluation of OFDM based watermarking robust to multipath spatial shifts, Int'l Journal of Computing and Digital Systems (Int. J. Com. Dig. Sys.), vol. 7, no. 1, pp. 51-58. ISSN 2210-142X. [Elsevier-Scopus].
- J11 Pullayikodi S. K., Tarhuni N., Ahmad A. and Bait Shiginah F. (2017): Computationally efficient robust color image watermarking using fast Walsh Hadamard transform, Journal of Imaging, vol. 3, no. 4, pp. 1-13. [Scopus].
- J12 Awadalla, M., Al Maashri, A., Pathuri, L. and **Ahmad, A.** (2017): **Customized hardware crypto engine for wireless sensor networks**, Indonesian Journal of Electrical Engineering and Computer Science (IJEECS), vol. 7, no. 1, pp. 263-275. Scopus.
- C13 Ahmad A. (2017): Challenges for test and fault-tolerance due to convergence of electronics, semiconductor systems and computing, IEEE Int'l Conference on Infocom Technologies and Unmanned Systems (Trends and Future Directions) (ICTUS), Amity University, Int'l Academic City, Dubai, UAE, 18-20 Dec., pp. 64-68. [IEEE Xplore-Scopus].
- C14 Suja Kalarikkal Pulayikodi, Naser Tarhuni, **Afaq Ahmad** and Fahad Bait Shiginah (2017): **OFDM based robust digital image watermarking resistant to multipath spatial shifts**, 9thIEEE-GCC Conference, Bahrain, pp 1-6, May. [IEEE Xplore-Scopus].
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Grant, Contract and Consultancy Supports

The following is the list of the received grants / contracts during the period either from Sultan Qaboos University (SQU) or from Petroleum Development of Oman (PDO). Before joining SQU, I received grants / contracts / consultancies from Council of Scientific & Industrial Research (CSIR) of India, Light & Co (Equipment & Accessories) Private Limited, India, University Grants Commission (UGC), Government of India, and Aligarh Muslim University – India.

Q. Services

a) EDITORIAL SERVICES

I have remarkable experience with journal publication process with good understanding of journals publishing, management and development.

You have extensive and remarkable experience in journal publishing, management, and development. My editorial roles include serving as an Editor, Associate Editor, and Guest Editor for numerous journals, with a strong focus on engineering, computer science, and related fields. Notable positions include being the Editor for Lecture Notes in Networks and Systems (Springer).

My work spans advisory and review roles for international journals, conferences, and scientific com mittees. I have been continuously rendering my services for international conferences' organization since 1989. Until now, I had rendered my services in various roles of conference organizing activities for more than 467 international conferences.

b) Services as Examiner and Evaluator

- Chaired many Examination Committees to conduct examinations of master & PhD theses/projects in colleges of engineering, science, economics and political sciences and agriculture and fisheries.
- Served as External Examiner to conduct examinations of master. MPhil & theses/projects in college of engineering, science, economics and political sciences and agriculture and fisheries.
- Served as Member of Examination Committee to conduct examinations of master, MPhil & PhD theses/projects in college of engineering, science, economics and political sciences and agriculture and fisheries. (27 MS Examinations).

c) EXAMINER SHIPS FOR UG & PG THEORY PROJECT AND LAB EXAMINATION

Served as External Examiner and moderator for various universities for undergraduate and postgraduate for theory and laboratory courses. Also, served as Examiner for many competitive tests / examinations for various Indian universities/ institutions/ government bodies and business corporations.

d) REPORT, APPLICATION & CV EVALUATION

I have a broad range of evaluation experience, including assessing research proposals and consultancy reports for universities and government organizations. I have evaluated faculty promotion dossiers across various academic ranks, including full professor, associate professor, and assistant lecturer. Additionally, I have assessed applications for

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prestigious awards, such as the best teacher award and best researcher award. My evaluation work also includes industrial training reports, senior undergraduate project reports, and admissions applications for both undergraduate and postgraduate programs. Furthermore, I have served as a referee for job seekers and admissions decisions.

e) SERVICES THROUGH IEEE & IEEE OMAN SECTION (REGION 8)

Continuing to serve as Chair of IEEE Special Interest Group of Humanitarian Technology (SIGHT) and Deputy Chair for IEEE Awards.

R. Learning through Continuing Education

I have actively participated in a wide range of workshops, seminars, webinars, and training courses since 1983, primarily focused on enhancing teaching, learning, and technical knowledge. Your professional development includes workshops on **outcome-based learning, quality assurance, online instruction**, and **educational technology** at institutions such as Sultan Qaboos University in Oman. These sessions have covered topics like **active learning**, **course design**, **assessment strategies**, **research innovation**, and **engineering education**. You've also participated in specialized training in **IoT**, **AI**, **5G technologies**, **smart cities**, and **biomedical signal processing**. Your engagement in global and local seminars and workshops has significantly enriched your expertise in fields such as **engineering education**, **technology integration in teaching**, **digital learning tools**, and **industry-specific advancements**. This diverse learning portfolio reflects a strong commitment to professional growth and the application of contemporary educational practices.