

Short Profile

Dr. Imran Ahmed Khan

Assistant Professor

Office Address:

Department of Electronics & Communication Engineering,
Faculty of Engineering and Technology,
Jamia Millia Islamia,
New Delhi-110025

✉ iakhan2@jmi.ac.in (Primary)

✉ imran.vlsi@gmail.com (Secondary)

Dr. Imran Ahmed Khan completed Ph.D. in Electronics from Jamia Millia Islamia (central university), New Delhi in 2015. He received B.Tech. (ECE) from Jamia Millia Islamia in 2006 and M.Tech. (VLSI Design) from CDAC-Noida (GGS Indraprastha University, New Delhi) in 2009 with Honours.

He is presently working as Assistant Professor at the department of ECE, Jamia Millia Islamia. Earlier, he has worked at Galgotia College, G.L. Bajaj Institute of Technology & Management, Greater Noida and Brown Hills College of Engg. & Tech. (Al-Falah trust), Faridabad. Before switching to academics Dr. Imran has also worked for Cadence Design System (Headquarter at California, USA).

Dr. Imran has published many research papers in refereed International Journals including fifteen papers in **SCI/Scopus indexed** journals. He has published many research papers in refereed International Conferences including fourteen papers in **IEEE/SPRINGER/Scopus** indexed conferences. He has published one national and one international patent. In addition he has also published eighteen books/book chapters with international publishers including **SPRINGER, Taylor & Francis and Wiley**.

He has guided **Ph.D.** candidate and currently guiding three Ph.D. candidates. He serves as reviewer (on invitation from Editor) of many International Journals including ten **SCI/Scopus Indexed** journals. He is also the Program Committee Member/Reviewer of more than forty IEEE/Springer/Scopus indexed conferences. Dr. Imran has done 4 week course on Teaching and Learning in Engineering (**TALE**) in 2019 with **86% marks (Silver Topper)** from **IISC Bangalore** and 12 Week Course on Switching Theory and Logic Design (**STLD**) in 2018 with **82% marks** from **IIT Kharagpur**.

Dr. Imran has organized several workshops and seminars including four **Department of Science and Technology (DST)** sponsored seminars and three **NITTTR, Chandigarh** funded training programs. Apart from it he has also organized one **DST** sponsored conference. He has also chaired a session in **SPRINGER** indexed conference. He was the core committee member of **NIRF** for Galgotia College of Engineering & Technology, Greater Noida. He was also the **Department In charge** and **Academic Coordinator** of IC department in Galgotia College. He is the **Ph.D. Coordinator** of Department of Electronics & Communication Engineering, Jamia Millia Islamia.

Dr. Imran is the member of International Association of Engineers (IAENG) and Institute for Engineering Research and Publication (IFERP). He was also the member of Institution of Communication Engineers and Information Technologies (ICEIT). His fields of interest include VLSI Design, Low Power Design, Digital Circuits & Systems and Devices & Nanoelectronic Circuits.

Full Profile
Curriculum Vitae

1. Name: Dr Imran Ahmed Khan
2. Designation: Assistant Professor
3. Office Address: Department of Electronics & Communication
Engineering, Faculty of Engineering & Technology,
Jamia Millia Islamia, Jamia Nagar, New Delhi-110025
4. Telephone (Direct) (Optional): 011-26981284
5. Email (Primary): iakhan2@jmi.ac.in
Email (Secondary): imran.vlsi@gmail.com
6. Field(s) of Specialization: VLSI Design, Low Power Design, Digital Circuits &
Systems and Devices & Nanoelectronic Circuits

7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	Jamia Millia Islamia, New Delhi, India	20 th December, 2019	Till Date
Associate Professor	Galgotia College of Engg. and Technology, Greater Noida, U.P., India	1 st December, 2017	19 th December, 2019
Assistant Professor	Galgotia College of Engg. and Technology, Greater Noida, U.P., India	16 th August, 2011	30 th November, 2017
Assistant Professor	G.L. Bajaj Institute of Technology and Management, Greater Noida, U.P., India	19 th July, 2010	16 August, 2011
Lecturer	Brown Hills College of Engg. & Tech. (Al-Falah trust), Faridabad, Haryana, India	5 th August, 2009	16 th July, 2010
Intern	Cadence Design System, Noida, India (Headquarter at California, USA)	2 nd Feb., 2009	31 st July, 2009

8. Academic Qualifications:

Course	Year	Division	University
Ph.D. (Electronics)	2015	-----	Jamia Millia Islamia (Central University)
M.Tech. (VLSI Design)	2009	First with Honours	CDAC, Noida (G.G. S. Indraprastha University)
B.Tech. (Electronics & communication)	2006	First	Jamia Millia Islamia (Central University)

9. Short Term Courses:

Course	Year	%age/Grade	University
Three Months (12 Week) Course on Switching Theory and Logic Design	2018	82%	IIT Kharagpur
One month (4 week) course on Teaching and Learning in Engineering (TALE)	2019	86% (Silver, Topper)	IISC Banglore

10. Conference/Seminars/Workshops Organized

- Faculty Coordinator for Cultural Council Event (Aaghaz-e-Mehfil) of Faculty of Engg. & Tech.-JMI, on 7th November, 2024.
- Member of Coordination Committee and a Session Coordinator of Student Induction Program (SIP)- Universal Human Values-I (UHV-I) for B.Tech., M.Tech., M.Sc.: Batch 2024-2025, from 8th August 2024 to 20th August 2024
- Member of organizing committee of Cultural Fest of Faculty of Engg. & Tech.-JMI on 29th February to 3rd March, 2024
- National Convener of International Conference on Sustainable Development, on 15, 16 July 2023, Delhi
- Organized a workshop on “**Application of Machine Learning & AI in Life Environment for the Development of G20 Countries**” in Association with Appwars Technologies Pvt. Ltd. on 28th February, 2023.
- Member of organizing committee of Cultural Fest of Faculty of Engg. & Tech.-JMI on 11-12th March, 2023.

- Chaired a session in **SPRINGER** indexed conference at International Conference on Sustainable Development, on 15, 16 July 2023, Delhi.
- Organized **NITTTR, Chandigarh funded** one week Short Term Course on “Digital System Design” through ICT from 28th Jan. 2019 to 1st Feb. 2019.
- Organized **NITTTR, Chandigarh funded** one week Short Term Course on “System Designing with Smart Controllers” through ICT from 27th May 2019 to 31st May 2019.
- Organized **NITTTR, Chandigarh funded** one week Short Term Course on “CMOS Analog Design” through ICT from 4th Feb. 2019 to 8th Feb. 2019.
- Organized a “Anti-drug” campaign on Nov. 19th, 2019 at Galgotia College of Engg. and Technology, Greater Noida.
- Organized Riviera 1.0 (fest of Department of Electronics and Instrumentation Engineering & Department of Instrumentation and Control Engineering) on 5th April, 2018 at Galgotia College of Engg. and Technology, Greater Noida.
- Organized a campaign on “Clean Campus Drive” on Dec. 12th, 2017 at Galgotia College of Engg. and Technology, Greater Noida.
- Organized a campaign on “Plastic Free Campus” on Sep. 14th, 2017 at Galgotia College of Engg. and Technology, Greater Noida.
- Member of organizing committee of two day national seminar on “Communication, Control, Modelling & Automation” on 23rd & 24th Sept, 2016, organized by Department of Electronics and Instrumentation & Instrumentation and Control Engineering, Galgotia College of Engg. and Technology, Greater Noida, Sponsored by **Department of Science and Technology (DST)**.
- Member of organizing committee of two day national seminar on “Advancements in Semiconductor Devices, Antenna, Power Control and Networks for Engineering Applications” on 25th & 26th Feb., 2016, organized by Department. of Instrumentation and Control Engineering, Galgotia College of Engg. and Technology, Greater Noida, Sponsored by **Department of Science and Technology (DST)**, Ministry of Science and Technology, Government of India.
- Member of organizing committee of two day national seminar on “Recent Advancements in Electrical, Electronics and Automation Sector (RAEEA)” on 1st & 2nd Sept., 2015, Organized by Deptt. Of Instrumentation and Control Engineering, Galgotia College of Engg. and Technology, Greater Noida, Sponsored by **Department of Science and Technology (DST)**.
- Member of organizing committee of **Department of Science and Technology (DST)** sponsored national conference on “Advances in VLSI, Embedded & Communication (AVEC -2010)” on 10th August, 2010, Organized by Deptt. Of Electronics & Communication, AL-Falah School of Engg. & Tech. Faridabad, Haryana.

11. Administrative and Academic Responsibilities

- **Ph.D. Coordinator** of Department of Electronics & Communication Engineering, Jamia Millia Islamia.
- **“Document Verification Officers”** for the Admissions of M. Tech. (E&C) Semester I for the Sessions 2020-21, 2021-22, 2022-23, 2023-24, 2024-25.
-
- **NBA Incharge** of Criteria 4 and criteria 6 for Department of Electronics & Communication, F/O Engg. & Technology, Jamia Millia Islamia, New Delhi for the Session 2024-25.
- **“Document Verification Officers”** for the Admissions of B. Tech. and B.Sc. (Aeronautics) Semester I for the Sessions 2021-22, 2022-23, 2023-24, 2024-25.
-
- **NPTEL Coordinator** for Department of Electronics & Communication, F/O Engg. & Technology, Jamia Millia Islamia, New Delhi for the Session 2024-25.
- **Project and Seminar Coordinator** of B.Tech. (E&C) for the Sessions 2021-22, 2022-23, 2023-24.
- **In charge** of Criteria 4 and criteria 6 of NAAC for department of Electronics & Communication, F/O Engg. & Technology, Jamia Millia Islamia, New Delhi for the Session 2023-24.
- **In charge** of Criteria 4 (Student’s Performance) of NBA for department of Electronics & Communication, F/O Engg. & Technology, Jamia Millia Islamia, New Delhi for the Session 2023-24.
- **“Document Verification Officers”** for the Admissions of Ph.D. (E&C) for the Session 2020-21, 2021-22.
- **DRC Member** of Department of Electronics & Communication Engineering, Jamia Millia Islamia.
- **BoS Member** of Department of Electronics & Communication Engineering, Jamia Millia Islamia.
- **Member** of Accreditation and Data Committee for the Session 2021-22.
- **Member** of committee for submission of data and evidence for NAAC yearly AQR 2020-21.

- Member of “Departmental Admission Committee” 2021.
- Member of “**NAAC Committee**” having 3 persons, Department of Electronics & Communication, Jamia Millia Islamia, New Delhi.
- Committee member of **National Institutional Ranking Framework (NIRF)** of Galgotia College of Engineering & Technology, Greater Noida.
- **NBA Coordinator** of ICE department, Galgotia College of Engineering & Technology, Greater Noida.
- **Academic Coordinator** of IC department in even semester of 2014-15 session, Galgotia College of Engineering & Technology, Greater Noida.
- Project coordinator of IC department in even semester of 2014-15 session, Galgotia College of Engineering & Technology, Greater Noida.
- Head of the class coordinators committee of IC 2nd year in even semester of 2012-13 session, Galgotia College of Engineering & Technology, Greater Noida.

➤ **Paper Setter in Other Engineering Colleges/Universities**

S. No.	Institute	Course and Department
1	Al-Falah School of Engineering & Technology (Al-Falah University), Faridabad	B.Tech. (Electronics & Communication Engineering)
2	Al-Falah School of Engineering & Technology (Al-Falah University), Faridabad	M.Tech. (VLSI Design)
3	Guru Nanak Institutions, Hyderabad	B.Tech. (Electronics & Communication Engineering)
4	University of Kashmir, Srinagar, J&K	B.E/B.Tech. 5 th SEMESTER (Electronics & Communication Engg.)

12. Subjects Taught

- Digital Electronics
- Basic Electronics
- Electronics Circuits
- Switching Theory and Logic Design
- Analog and Digital Electronics
- Telemetry Principles

- Digital Logic Design
- Electronics Engineering
- Electronic Measurement and Instrumentation
- Data Communication and Computer Networks
- Circuit Analysis and Synthesis

13. Acted/Acting as Reviewer (on invitation from the Editors) for following **SCI/Scopus Indexed** journals:

- Elsevier's Computers and Electrical Engineering, impact Factor 4.3 (2023)
[Indexed in SCI, Scopus and Elsevier]
- **Springer's** Circuits, Systems, and Signal Processing (CSSP), ISSN: 02278-081X and 1531-5878, **US**, since **2013**.
[Indexed in SCI]
ISI Impact Factor: 0.982, SJR: 0.447 H Index: 28, SNIP: 1.144, IPP: 1.615
- **Physica Scripta**
IOP Publication, Impact Factor 2.6
[Indexed in SCI, Scopus]
- Springer's Computers & Industrial Engineering, , impact Factor 6.7
[Indexed in SCI, Scopus]
- **Engineering Research Express**
IOP Publication, impact Factor 1.5
[Indexed in ESCI, Scopus]
- International Journal of Computational Vision and Robotics
Publisher: Inderscience, cite score: 1.8
[Indexed in SCOPUS]
- Journal of Experimental & Theoretical Artificial Intelligence, ISSN: 0952-813X (Print), 1362-3079 (Online), **United Kingdom**
[SCI Indexed, Publisher: Taylor & Francis]
ISI Impact Factor: 1.0000 (2014)
- World Applied Sciences Journal (WASJ), ISSN: 1818 – 4952, **Iran**, since 2012.
[Scopus (Elsevier) Indexed and ISI indexed]
ISI Impact Factor: 0.234, SJR: 0.222 H Index: 8, SNIP: 0.353, IPP: 0.183
- Arabian Journal for Science and Engineering, ISSN: 2193-567X (print version), ISSN: 2191-4281 (electronic version), **Saudi Arabia**
[Indexed in SCI, ISI and Springer]
ISI Impact Factor: 0.728 (2015), SJR: 0.34 H Index: 20

- Indian Journal of Science and Technology, ISSN: 09746846, 09745645
[Indexed in ISI and Scopus]
SJR: 0.27 H Index: 22
- COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering, Engineering (Emerald, **United Kingdom**)
[Indexed in SCI and Scopus]

Program Committee Member/Reviewer of more than forty IEEE/Springer/Scopus indexed conferences.

14. Publications

(A) Research Papers in Refereed International Journals

1. Imran Ahmed Khan and Mirza Tariq Beg, “Design and Analysis of Low Power Master Slave Flip-Flops” *Informacije Midem-Journal of Microelectronics, Electronic Components and Materials*, ISSN 0352-9045 & 0352-9045, Vol. 43, No. 1, pp 41-49, **2013**.

[SCI/Scopus Indexed]

ISI Impact Factor: 0.369

2. Imran Ahmed Khan, Mirza Tariq Beg, S. Gaurav and Mohit Prasad Mamgain “Design of High Performance and Low Power Double Edge Triggered Clocked Storage Element” *World Applied Sciences Journal (WASJ)*, ISSN 1818-4952, Vol. 31, No. 10, pp. 1783-1790, **2014**.

[SCI/Scopus Indexed]

ISI Impact Factor: 0.234

3. Imran Ahmed Khan and Mirza Tariq Beg, “Clock Gated Single Edge Triggered Flip-Flop Design with Improved Power for Low Data Activity Applications” *International Journal on Electrical Engineering and Informatics*, Print ISSN 2085-6830/online e-ISSN 2087-5886, Vol. 6, No. 3, 2014, pp. 562-576.

[SCI/Scopus Indexed]

Impact Factor: 0.2 H Index: 7 (2014)

4. Imran Ahmed Khan and Mirza Tariq Beg, “New Single Edge Triggered Flip-Flop Design with improved Power and Power Delay Product for Low Data Activity Applications” *World Applied Sciences Journal (WASJ)*, ISSN 1818-4952, Volume 22, No. 10, pp. 1520-1526, **2013**. [SCI/Scopus Indexed]

Impact Factor: 0.234

5. Imran Ahmed Khan and Mirza Tariq Beg, “Comparative Analysis of Low Power Master Slave Single Edge Triggered Flip-Flops” *World Applied Sciences Journal (WASJ)*, ISSN 1818-4952, Vol. 16, pp. 15-21, **2012**.

[SCI/Scopus Indexed]

ISI Impact Factor: 0.234

6. Imran Ahmed Khan, Mirza Tariq Beg and Owais Ahmad Shah “Novel Low Power and Low Transistor Count Flip-Flop Design with High Performance” *Innovative Systems Design*

and Engineering (ISDE), ISSN 2222-1727 (Paper) ISSN 2222-2871 (Online), Vol. 3, No.11, pp 50-60, **2012**.

[Index Copernicus and UGC Indexed]

7. Imran Ahmed Khan and Mirza Tariq Beg, “A New Area and Power Efficient Single Edge Triggered Flip-Flop Structure for Low Data Activity and High Frequency Applications” *Innovative Systems Design and Engineering (ISDE)*,ISSN 2222-1727 (Paper) ISSN 2222-2871 (Online), Vol. 4, No. 1, pp 1-12, **2013**.

[Index Copernicus and UGC indexed]

8. Imran Ahmed Khan and Mirza Tariq Beg, “Clock Gated Power Efficient Single Edge Triggered Flip-Flop Design for Low Data Activity Applications” *International Journal of Electronics and Communication Technology*, ISSN 2230-9543, Vol. 5, No. 3, pp. 9-14, **2014**.

[Indexed by Index Copernicus and UGC]

9. Imran Ahmed Khan and Mirza Tariq Beg, “Design of Semi-Static SET Flip-Flop for Low Power and High Performance Applications” *International Journal of Computer Science and Information Technologies*, ISSN 0975-9646, Vol. 5, No. 1, pp. 284-289, **2014**.

[Indexed by Index Copernicus and UGC]

10. Imran Ahmed Khan, Pragya Jaitly, Ram Krishna Gupta and Sakshi Kishor, “Design of Zone wise Vehicle Parameter Control System” *International Journal of Advanced Research in Computer Science and Software Engineering*, Vol. 5, No. 3, 2015, pp. 132-136.

[Indexed by Scirus, Index Copernicus and UGC]

11. Imran Ahmed Khan and Mirza Tariq Beg, “Low Power Clock Gated Master Slave Single Edge Triggered Flip-Flop” *International Journal of Electronics and Communication Technology*, ISSN 2230-9543, Vol. 5, No. 3, pp. 143-149, **2014**.

[Indexed by Index Copernicus and UGC]

12. Imran Ahmed Khan, “High Speed Power Efficient Static Single Edge Triggered Storage Element with Reduced Clocked Transistors” *International Journal of Electronics and Communication Technology*, ISSN 2230-9543, Vol. 6, No. 1, 2015, pp. 62-65.

[Indexed by Index Copernicus and UGC]

13. Imran Ahmed Khan and Khushboo Gupta, “Design of Rain Detection System for Power Windows” *International Journal of Advanced Research in Computer Science and Software Engineering*, Vol. 5, No. 4, 2015, pp. 1523-1527.

[Indexed by Scirus, Index Copernicus and UGC]

14. Imran Ahmed Khan and Mirza Tariq Beg, “Disadvantages of High Power Integrated Circuits and Requirements of VLSI ICs with Low Power Consumption” *International Journal Of Advances in Engineering Science and Technology (IAEST)*, ISSN: 2249-913X, Vol. 4, No. 1, 2015, pp. 42-46.

15.Imran Ahmed Khan and Mashhood Hassan “Power Efficient Dual Edge Triggered storage design” *International Journal of Engineering and Technology (IJET)*, ISSN (Print) : 2319-8613, ISSN (Online) : 0975-4024, vol. 9, no. 2, pp. 427-434, 2017.

[SCI/Scopus Indexed]

Impact Factor: 0.18

16. Imran Ahmed Khan, Mukesh Maurya, Rishabh Gupta, Prince Singh, "Real Time Barcode Recognition System using LabVIEW" *International Journal of Advanced Research in Computer Science and Software Engineering*, Vol. 7, No. 4, 2017, pp. 68-72.

[Indexed by Scirus, Index Copernicus and UGC]

17. Md Rashid Mahmood and **Imran Ahmed Khan**, “A Novel Compact Microstrip U-Shaped Resonators Band pass Filter” *The International journal of analytical and experimental modal analysis*, ISSN NO: 0886-9367, Volume XI, Issue X, October 2019.

18. Imran Ahmed Khan and Mirza Tariq Beg, “Power Efficient Design of Semi-Dynamic Master Slave Single Edge Triggered Flip-Flop” *International Journal on Electrical Engineering and Informatics*, Print ISSN 2085-6830/online e-ISSN 2087-5886, Vol. 11, No. 2, pp. 252-262, 2019.

[SCI/Scopus Indexed]

Impact Factor: 0.2

19. Md Rashid Mahmood and **Imran Ahmed Khan**, “A Novel Compact Microstrip U-Shaped Resonators Band pass Filter” *The International journal of analytical and experimental modal analysis*, ISSN NO: 0886-9367, Volume XI, Issue X, pp. 900-910, October 2019.

[UGC Indexed]

20. Imran Ahmed Khan, “Design and Implementation of Carbon Nano-tube based Full Adder at 32nm Technology for High Speed and Power Efficient Arithmetic Applications” *Journal of Physics: Conference Series*, ISSN: 17426588, 17426596, Vol. 2161, Jan. 2022

[SCOPUS Indexed] H-index: 85

21. Owais Ahmad Shah, Geeta Nijhawan and **Imran Ahmed Khan**, "Improved Sense Amplifier Based Flip Flop Design For Low Power And High Data Activity Circuits" *Journal of Applied Science and Engineering*, ISSN 2708-9975, vol. 26, No. 7, 2023, pp. 1047-1053

[https://doi.org/10.6180/jase.202307_26\(7\).0015](https://doi.org/10.6180/jase.202307_26(7).0015)

[SCI/Scopus Indexed]

Impact Factor (2023): 1.3

22. Owais Ahmad Shah, Geeta Nijhawan and **Imran Ahmed Khan**, "100Mhz-2GHz pulse triggered flip-flops in 32nm technology for low power and high performance digital cmos circuits” *ICTACT Journal on Microelectronics*, issn: 2396-1672, 2395-1680 (online), volume: 08, issue: 02, pp. 1368-1375, July 2022

[UGC Indexed]

23. Owais Ahmad Shah, Geeta Nijhawan and **Imran Ahmed Khan**, "Low power area efficient self-gated flip flop: Design, implementation and analysis in emerging devices, Engineering and Applied Science Research, 2539-6161, Vol. 49, No. 6, pp. 744-752, 2022

[SCI/Scopus Indexed]

<https://ph01.tci-thaijo.org/index.php/easr/article/view/248964>

24. Owais Ahmad Shah, Geeta Nijhawan and **Imran Ahmed Khan**, "PVT Immune Power Efficient Dual Edge Triggered Flip-flop for Portable Applications up to GHz frequency Range" ICTACT Journal on Microelectronics, Vol 8, no. 3, pp. 1400-1407, October 2022.

10.21917/ijme.2022.0241

[UGC Indexed]

25. **Imran Ahmad Khan**, Maseera Shahid, J.P. Keshari and Amrita Rai. "A power-efficient error detection and correction circuit design using Hamming Codes for portable electronic devices" Mathematical Modelling of Engineering Problems, 2369-0739, Vol. 10, No. 3, pp. 951-956, 2023.

<https://doi.org/10.18280/mmep.100327>

[SCOPUS Indexed]

26. **Imran Ahmed Khan**, Amrita Rai, J. P. Keshari, M. Nizamuddin, Seema Nayak and Deepti Sharma, "Design, Simulation and Comparative Analysis of Carbon Nanotube based Energy Efficient Priority Encoders for Nanoelectronic Applications" Elsevier's e-Prime - Advances in Electrical Engineering, Electronics and Energy, 2772-6711, Volume 4, June 2023.

<https://doi.org/10.1016/j.prime.2023.100138>

[SCI/Scopus Indexed]

27. Owais Ahmad Shah, Geeta Nijhawan and **Imran Ahmed Khan**, "A Glitch Free Variability Resistant High Speed and Low Power Sense Amplifier Based Flip Flop for Digital Sequential Circuits" Engineering Research Express, Vol. 5, no. 3, 2 August, 2023

DOI: 10.1088/2631-8695/acecdc

Impact Factor: 1.7 (2023)

[SCI/Scopus Indexed]

28. **Imran Ahmed Khan**, Amrita Rai, Owais Ahmad Shah, M. Nasim Faruque, J. P. Keshari, "Predictive Modeling of Carbon Nanotube Structures Using Machine Learning Techniques" accepted in International Journal of Computational Vision and Robotics, ISSN online:1752-914X

[SCI/Scopus Indexed]

29. Imran Ahmed Khan, Owais Ahmad Shah, Durgesh Nandan, Amrita Rai , Anurag Mahajan “Power Efficient Counter Design using CNTFET with AI Integration” Recent Advances in Electrical & Electronic Engineering, Impact Factor: 0.6, Accepted on 4th Novem, 2024 DOI: *10.2174/0123520965358804241209095031*

[ESCI and Scopus Indexed]

29. Md Zafar Alam, Imran Ahmed Khan*, S. Intekhab Amin and Mirza Tariq Beg, “Design and Analysis of High-Performance Schottky Barrier β -Ga₂O₃ MOSFET with Enhanced Drain Current, Breakdown Voltage, and PFOM" International Journal of Numerical Modelling: Electronic Networks, Devices and Fields. ISSN: 1099-1204, Vol. 38, No.1, Jan-Feb. 2025, John **Wiley** and Sons Ltd, First published: 25 December 2024

<https://doi.org/10.1002/jnm.70009>

SCI and SCOPUS Indexed, Impact Factor: 1.6

(B) Proceedings of Refereed International Conferences

1. Imran Ahmed Khan, Owais Ahmad Shah and Mirza Tariq Beg, “Analysis of Different Techniques for Low Power Single Edge Triggered Flip Flops” *World Congress on Information and Communication Technologies (WICT), IEEE International Conference*, pp 1363 – 1367, 11-14 Dec., **2011**.

[Indexed in Scopus and IEEE Xplore]

SJR: 0.15 H Index: 4, SNIP: 0.468, IPP: 0.173

2. Imran Ahmed Khan, Danish Shaikh and Mirza Tariq Beg, “Analysis of Double Edge Triggered Clocked Storage Elements” *In the proceedings of International Conference on Advances in Computing, Communications and Informatics (ICACCI)*, pp 1100-1103, 3-5 Aug., **2012**.

[Indexed in Scopus and ACM Digital Library and Google Scholar]

3. Anand Kumar, Shalini and **Imran Ahmed Khan**, “Optimized SRAM Cell Design for High Speed and Low Power Applications”, *World Congress on Information and Communication Technologies (WICT), IEEE International Conference*, pp 1357-1362, 11-14 Dec., **2011**.

[Indexed in Scopus and IEEE Xplore]

SJR: 0.15 H Index: 4, SNIP: 0.468, IPP: 0.173

4. Mashhood Hasan, Jai Prakash Pandey, **Imran Ahmed Khan** and Rajeev Chauhan, “A Hybrid Control Algorithm for Extraction of Voltage Harmonics to Mitigate Power Quality Problems Using UPQC,” *First International Conference on Advanced Computational & Communication Paradigms-2017 (ICACCP 2017)*, IEEE Conference Record # 42882, pp. 49, Sept. 08-10, 2017.

5. Imran Ahmed Khan, Danish Shaikh and Mirza Tariq Beg, “2 GHz Low Power Double Edge Triggered flip-flop in 65nm CMOS Technology” *IEEE International Conference on Signal Processing, Computing and Control (IEEE ISPCC)*, pp 1-5, March 15-17, **2012**.

[Indexed in Scopus and IEEE Xplore]

SJR: 0.10

6. Deepak Choudhary, Sanjay Kumar Singh, Jaishankar Keshari and **Imran Ahmed Khan**, “QoS of WSN authentication based on standard 802.1X” *IEEE International Conference on Advances in Computing, Communication Control and Networking –ICACCCN (ICAC3N'18)*, ISBN No. 9781538641194, pp. 1147-1152, October 12-13, 2018.

[Indexed in Scopus and IEEE Xplore]

7. Owais Ahmad Shah, **Imran Ahmed Khan**, Geeta Nijhawan and Isha Garg, “Low Transistor Count Storage Elements and their Performance Comparison” *IEEE International Conference on Advances in Computing, Communication Control and Networking – ICACCCN (ICAC3N'18)*, ISBN No. 9781538641194, pp. 801-805, October 12-13, 2018.

[Indexed in Scopus and IEEE Xplore]

8. Shahad Eqbal, **Imran Ahmed Khan**, R.L.Yadava “Texture Feature Extraction of Medical Image by GLRLM using Wavelet Transform” in 8th International Conference on Innovation

in Electronics and Communication Engineering (ICIECE-2019), Guru Nanak Institutions Technical Campus, Hyderabad , **SPRINGER**, 2-3 August, 2019.

9. **Imran Ahmed Khan**, Owais Ahmad Shah, Amrita Rai, Puneet Sharma, Prakhar Mishra and Satvik Vats “Odd Counter: New Design and Performance Analysis using Carbon Nano Tube Transistors for High Performance Applications” **IEEE** International Conference on Computational Intelligence and Sustainable Engg. Solutions (*CISES*), G.L.Bajaj, Greater Noida, India, 28-30 April, 2023, pp. 610-613.

doi: 10.1109/CISES58720.2023.10183403

10. **Imran Ahmed Khan**, Owais Ahmad Shah, D. Tiwari, P. K. Mavi, A. Tomar and A. Yadav, "High Performance Design of Single Edge Triggered Johnson Counter," *2023 4th IEEE Global Conference for Advancement in Technology (GCAT)*, Bangalore, India, 6th & 8th October 2023, pp. 1-5, doi: 10.1109/GCAT59970.2023.10353354.

11. **Imran Ahmed Khan**, Owais Ahmad Shah, Satvik Vats, Sujata Arora, Md Rashid Mahmood, Pawan Whig, “Advancements in Binary Number Processing: Analyzing a CNTFET-based Digital Circuit for 3-bit Up and Down Counting with Challenges in Artificial Intelligence” ICSCNA Conference Proceedings. 15-17, November 2023, in Bharath Niketan Engineering College, Theni, Tamil Nadu, India.

12. Rupesh Kumar Tipu, Owais Ahmad Shah, Satvik Vats, Arjit Tomar, **Imran Ahmed Khan**, Pawan Whig, Kunwar Babar Ali, Aditya Verma “Predictive Modeling of Compressive Strength in Coconut Shell-Embedded Concrete Using Ensemble Regression Models" 2nd IEEE International Conference on Integrated Intelligence and Communication Systems (ICIICS-2024) in association with IEEE Bangalore Section during 22-23 November 2024 at Sharnbasva University, Kalaburagi.

13. Diwakar Kumar, **Imran Ahmed Khan** and Deepti Sharma, “A Multiband, wideband wearable textile antenna for body area network applications” accepted in International Conference. on. Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (**IC3ECSBHI-2025**), 16-18 January, 2025, Sponsored by IEEE and organized by Gautam Buddha University, Greater Noida

14. Maryam Raza, **Imran Ahmed Khan** and M. Nizamuddin “Design and Simulation of CNTFET Based Level Shifter For Biomedical Applications” accepted in 6th International Conference on Emerging Technologies: Micro to Nano (ETMN-2024), 22-23 November, 2024, jointly organized by Jamia Millia Islamia, New Delhi and Manipal University, Jaipur

(C) Books/Book Chapters in Refereed International Publication

1. Mashhood Hasan, Jai Prakash Pandey, **Imran Ahmed Khan** and Rajeev Chauhan, “A Hybrid Control Algorithm for Extraction of Voltage Harmonics to Mitigate Power Quality Problems Using UPQC,” *Advanced Computational and Communication Paradigms*, ISBN 978-981-10-8240-5, *Lecture Notes in Electrical Engineering (LNEE)*, Volume 475, **Springer, 2018.**

[SCOPUS indexed]

2. Deepak Choudhary, Jaishankar Keshari and **Imran Ahmed Khan**, “Prediction of Compressive Strength of Ultra-High Performance Concrete using SFS and ANN” *Advances in Computational Intelligence and Communication Technology. Advances in Intelligent Systems and Computing*, vol. 1086. **Springer, Singapore** Online ISBN: 978-981-15-1275-9, 2020

[SCOPUS indexed]

3. **Imran Ahmed Khan**, Md. Rashid Mahmood and J.P. Keshari, “Analytical comparison of Power Efficient and High Performance Adders at 32nm Technology” *Innovations in Electronics and Communication Engineering, Lect. Notes in Networks and Systems*, Vol. 107, 978-981-15-31729, 484905_1_En, (62), **SPRINGER** Singapore, 2020.

[SCOPUS indexed]

4. Naveen Rathee, Jaishanker Prasad Keshari, **Imran Ahmed Khan**, Sandeep Kumar, Monika Singh, Varnika Rathee, Gaurav Sinha, “An Innovative smart IoT Device to measure and monitor patient’s Critical parameters in hospitals” Book titled *Artificial Intelligence in Cyber Physical Systems: Principles and Applications*. ISBN 9781032164830, Routledge and **CRC Press, Taylor & Francis Group, 16 March, 2023.**

<https://www.routledge.com/Artificial-Intelligence-in-Cyber-Physical-Systems-Principles-and-Applications/Sagar-Nand-Kumar-Das-Sahana/p/book/9781032164830#>

[SCOPUS indexed]

5. **Imran Ahmed Khan**, Md Rashid Mahmood, J.P. Keshari and Mirza Tariq Beg, “Design of Low Power CNTFET Parity Generators for High Speed Data Transmission” *Innovations in Electronics and Communication Engineering, Lect. Notes in Networks and Systems*, Vol. 355, ISBN: 978-981-16-8511-8, Series ISSN: 2367-3370, **SPRINGER** Singapore, pp. 605-611, **13 March, 2022.**

[SCOPUS indexed]

6. **Imran Ahmed Khan** and Md. Rashid Mahmood, “Design and Analysis of Power Efficient Carbon Nano Tube based Parity Checker Circuits for High Data Transmission Rate” *Innovations in Electronics and Communication Engineering, Lect. Notes in Networks and Systems*, Vol. 355, ISBN: 978-981-16-8511-8, Series ISSN: 2367-3370, **SPRINGER** Singapore, pp. 597-603, **13 March, 2022.**

[SCOPUS indexed]

7. Md Rashid Mahmood, Harpreet Kaur, Manpreet Kaur, Rohit Raja and **Imran Ahmed Khan** “Ambient Intelligence and Internet of Things: An Overview” book entitled *Ambient*

Intelligence and Internet Of Things: Convergent Technologies, ISBN: 978-1-119-821847, Wiley, USA, 20 December 2022

<https://doi.org/10.1002/9781119821847.ch1>

[SCOPUS indexed]

8. **Imran Ahmed Khan**, M. Wadhwa, P. Mishra, P. Sharma, “New Prime Number Counter: Design and Performance Analysis Using CMOS and Carbon Nanotubes” In: Khan, Z.H., Jackson, M., Salah, N.A. (eds) Recent Advances in Nanotechnology. ICNOC 2022. Springer Proceedings in Materials, vol 28. ISBN: 978-981-99-4684-6, pp 205–211, **Springer**, Singapore, Book Electronic ISSN: 2662-317X, 8 september, 2023

https://doi.org/10.1007/978-981-99-4685-3_28

[SCOPUS indexed]

9. M. Raza, **Imran Ahmed Khan**, M. Nizamuddin, “Design and Simulation of Pure CNTFET-OTA-Based Low-Pass Filters” In: Khan, Z.H., Jackson, M., Salah, N.A. (eds) Recent Advances in Nanotechnology. ICNOC 2022. Springer Proceedings in Materials, vol 28. **Springer**, Singapore. pp 137–142, 8 september, 2023

https://doi.org/10.1007/978-981-99-4685-3_18

[SCOPUS indexed]

15. Tools Used:

- Encounter Timing System (Cadence)
- Encounter Power System (Cadence)
- Virtuoso (Cadence)
- SOC encounter
- Xilinx ISE 7.1i
- Modelsim (Mentor Graphics)
- Tanner
- PSPICE
- HSPICE
- IC Station (Mentor Graphics)
- MATLAB
- Silvaco TCAD

16. Membership of Learned Bodies

- Member of Institution of Communication Engineers and Information Technologies (ICEIT), Membership No. M1000131A.
- Member of International Association of Engineers, Membership No. IAENG 239886, Hong Kong.

- Member of Institute for Engineering Research and Publication (IFERP), Membership No. PM3316302.

17. Paper presented/Invited Lecture:

- Predictive Modeling of Compressive Strength in Coconut Shell-Embedded Concrete Using Ensemble Regression Models" 2nd IEEE International Conference on Integrated Intelligence and Communication Systems (ICIICS-2024) in association with IEEE Bangalore Section during 22-23 November 2024 at Sharnbasva University, Kalaburagi.
 - Presented a paper entitled "Advancements in Binary Number Processing: Analyzing a CNTFET-based Digital Circuit for 3-bit Up and Down Counting with Challenges in Artificial Intelligence" in International Conference on Sustainable Communication Networks and Application (ICSCNA-2023), 15-17, November 2023, organised by Bharath Niketan Engineering College, Theni, Tamil Nadu, India.
 - Presented a paper entitled "Design and Performance Analysis of Gray Code Counter using CNTFET for Sustainable Development with Challenges in AI Integration" Scopus indexed International Conference on Sustainable Development, 15,16 July 2023, Delhi.
 - Presented paper entitled "High Performance Design of Single Edge Triggered Johnson Counter" in 2023 4th Global Conference for Advancement in Technology (GCAT) during 6th & 8th October 2023, Nagarjuna College of Engineering and Technology, Bengaluru, sponsored by IEEE Bangalore Section.
 - Delivered an invited talk on "Low Power Digital Design" at Amity University on 27th October, 2020.
 - Presented a paper entitled "Odd Counter: New Design and Performance Analysis using Carbon Nano Tube Transistors for High Performance Applications" **IEEE** International Conference on Computational Intelligence and Sustainable Engg. Solutions (CISES), G.L.Bajaj, Greater Noida, India, 28-30 April, 2023, pp. 610-613. doi: 10.1109/CISES58720.2023.10183403
 - Presented a paper entitled "Design and Analysis of Power Efficient Carbon Nano Tube based Parity Checker Circuits for High Data Transmission Rate" 9th International Conference on Innovations in Electronics and Communication Engineering, 2021, August 13-14, 2021
- Presented a paper entitled "Design and Implementation of Carbon Nano-tube based Full Adder at 32nm Technology for High Speed and Power Efficient Arithmetic Applications" International Conference on Artificial Intelligence, Computation Electronics and Communication systems (AICECS-2021), **Manipal Institute of Technology, Manipal**, 28th -30th October, 2021

- Presented a paper entitled “Design of Low Power CNTFET Parity Generators for High Speed Data Transmission” 9th International Conference on Innovations in Electronics and Communication Engineering, 2021.
- Presented a paper entitled “Analytical comparison of Power Efficient and High Performance Adders at 32nm Technology” in 8th International Conference on Innovation in Electronics and Communication Engineering (ICIECE-2019), **SPRINGER**, 2-3 August, 2019.
- Presented a paper entitled “A Novel Compact Microchip U-shaped Resonator Bandpass Filter” in 8th International Conference on Innovation in Electronics and Communication Engineering (ICIECE-2019), **SPRINGER**, 2-3 August, 2019.
- Presented a paper entitled “Texture Feature Extraction of Medical Image by GLRLM using Wavelet Transform” in 8th International Conference on Innovation in Electronics and Communication Engineering (ICIECE-2019), Guru Nanak Institutions Technical Campus, Hyderabad , **SPRINGER**, 2-3 August, 2019.
- Presented a paper entitled “Low Transistor Count Storage Elements and their Performance Comparison” in **IEEE International Conference on Advances in Computing, Communication Control and Networking –ICACCCN (ICAC3N'18)**, ISBN No.# 978 - 1 -5386 -4119 – 4, October 12-13, 2018.
- Presented paper entitled "Optimized SRAM Cell Design for High Speed and Low Power Applications”, *World Congress on Information and Communication Technologies (WICT)*, **Indexed in Scopus and IEEE Xplore**, 11-14 Dec., **2011**.
- Presented paper entitled "Analysis of Different Techniques for Low Power Single Edge Triggered Flip Flops” *World Congress on Information and Communication Technologies (WICT)*, **Indexed in Scopus and IEEE Xplore**, 11-14 Dec., **2011**.
- Presented paper entitled “Disadvantages of High Power Integrated Circuits and Requirements of VLSI ICs with Low Power Consumption” in National Conference on Recent Advances in Communication, Electronics and Electrical Engineering (RACE), ITS Engg. College, Greater Noida, 27-28 March, 2015
- Presented paper entitled "2 GHz LowPower Double Edge Triggered flip-flop in 65nm CMOS Technology" in **IEEE International Conference on Signal Processing, Computing and Control (IEEE ISPCC)**, **Indexed in Scopus and IEEE Xplore**, Wagnhat, Shimla, March 15-17, 2012.

18. Conference/FDP/Seminar Attended:

- Completed one week Faculty Development Program on “AI for SDGs under Unnat Bharat Abhiyaan” *Conducted by* Electronics and Communication Engineering Department, NITTTR, Chandigarh from 18/11/2024 to 22/11/2024.

- Completed one month faculty induction programme (FIP) with “A Grade” organized by UGC HRDC, Jamia Millia Islamia, New Delhi from 10th Feb. to 11th March, 2021.
- Completed two week interdisciplinary Refresher course in “Advanced Research Methodology” with ‘A+’ grade from 22 November – 06 December, 2022 organized by Ramanujan College, University of Delhi under the aegis of Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers and Training.
- Completed the NEP 2020 Orientation & Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) Organized by MMTTC, Jamia Millia Islamia, New Delhi from 05th February to 14th February 2024.
- Participated in the webinar on “Assessment and Accreditation Process of NAAC” organized by NAAC, Bengaluru and IQAC, Jamia Millia Islamia, New Delhi on July 28, 2020.
- Participated in one week Faculty Development Program on “Communication Technologies - Connectivity Evolutions” *Conducted by* Electronics and Communication Engineering Department, NITTTR, Chandigarh from 27/05/2024 to 31/05/2024
- Got certificate of excellence for “Outstanding Performance” in the first international level online quiz competition on “Covid-19 Awareness Championship” on 30th May, 2020 organized by MIT Art, Design and Technology University, Loni Kalbhor, Pune.
- Participated in one week Faculty Development Program on “Recent Developments in optical Communication and Antenna Technology (RDOPCAT-2019)” organized by Department of Electronics and Communication Engineering, Galgotias College of Engg. and Technology, Greater Noida, Sponsored by **Dr. A.P.J. Abdul Kalam Technical University, Lucknow** under **TEQIP – III** between 14th Oct. 2019 and 18th Oct. 2019.
- Participated in one week Short Term Course on “Digital System Design” through ICT in Collaboration with **NITTTR, Chandigarh** from 28th Jan. 2019 to 1st Feb. 2019.
- Participated in one week Short Term Course on “SYSTEM DESIGNING WITH SMART CONTROLLERES” through ICT in Collaboration with **NITTTR, Chandigarh** from 27th May 2019 to 31st May 2019.
- Participated in one week Short Term Course on “CMOS Analog Design” through ICT in Collaboration with **NITTTR, Chandigarh** from 4th Feb. 2019 to 8th Feb. 2019.
- Participated in one week Short Term Course on “Microcontrollers and embedded system” through ICT in Collaboration with **NITTTR, Chandigarh** from 25th March 2019 to 29th March 2019.
- Participated in one week Short Term Course on “Indian Electricity Rule and Code of Practices” through ICT in Collaboration with **NITTTR, Kolkata** from 16th December, 2019 to 20th December, 2019.

- Participated in one week Short Term Course on “Optimization Techniques with Engineering Applications” through ICT in Collaboration with **NITTTR, Chandigarh** from 10th Dec. 2018 to 14th Dec. 2018.
- Participated in one week **AICTE recognized Short Term Course** on “Scilab Programming” through ICT conducted by Electronics Service Centre, **National Institute of Technical Teachers Training and Research (NITTTR)**, Chandigarh, 14th May 2018 to 18th May 2018.
- Participated in one week AICTE recognized Faculty Development Program on “Emerging Trends in Antenna Design & Communication Technologies (ETADCT-2018)” organized by Department of Electronics and Communication Engineering, Galgotias College of Engg. and Technology, Greater Noida, Sponsored by **Dr. A.P.J. Abdul Kalam Technical University, Lucknow** under **TEQIP – III** between 16th July 2018 and 20th July 2018.
- Participated in one week AICTE recognized Faculty Development Program on “Advances in Communication and Networking” conducted by Department of Electronics and Communication Engineering, Galgotias College of Engg. and Technology, Greater Noida, Sponsored by **Dr. A.P.J. Abdul Kalam Technical University, Lucknow**, 17th July 2017 to 21st July 2017.
- Participated in two day national seminar on “Communication, Control, Modeling & Automation” on 23rd & 24th Sept, 2016, Organized by Deptt. of Electronics and Instrumentation & Instrumentation and Control Engineering, Galgotia College of Engg. and Technology, Greater Noida, Sponsored by **Department of Science and Technology (DST)**, Ministry of Science and Technology, Government of India.
- Participated in two day national seminar on “Advancements in Semiconductor Devices, Antenna, Power Control and Networks for Engineering Applications” on 25th & 26th Feb., 2016, Organized by Deptt. Of Instrumentation and Control Engineering, Galgotias College of Engg. and Technology, Greater Noida, Sponsored by **Department of Science and Technology (DST)**, Ministry of Science and Technology, Government of India.
- Participated in one week **AICTE recognized Faculty Development Program** on “Electronic Components, PCB Layout, Fabrication & Testing through ICT” conducted by Electronics Service Centre, **National Institute of Technical Teachers Training and Research (NITTTR)**, Chandigarh, 9th March 2015 to 13th March 2015.
- Participated in a two day national seminar on “Recent Advancements in Electrical, Electronics and Automation Sector (RAEEA)” on 1st & 2nd Sept., 2015, Organized by Deptt. Of Instrumentation and Control Engineering, Galgotias College of Engg. and Technology, Greater Noida, Sponsored by **Department of Science and Technology (DST)**.

- Participated in International Conference on Advances in Computing, Communications and Informatics (ICACCI), **IEEE Conference**, indexed in Scopus, 24th - 27th Sept., 2014.

- Participated in the “National Workshop on earth Science” on 3 and 4 March 2010, organized by Brown Hills College of Engg. & Tech., Faridabad, Haryana and catalyzed & supported by **Ministry of Earth science, Government of India**.

- Participated in the “National Conference on operations research applications: Future Trends (ORAFT-2011)” on 23, 24 April 2011, organized by G.L. Bajaj Institute of technology and management, Greater Noida in association with G.B. Technical University, Lucknow.

- Attended two days ‘Silvaco TCAD workshop 2008’ jointly organized by Silvaco International and CDAC, Noida, 10th - 11th September 2008.