CURRICULUM VITAÉ

ANGSHUMAN KHAN
PhD, **NIT Patna**
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IEEE Member ID: 95658158

OBJECTIVES:

I desire to become a contributor in the field of research and teaching where I can explore all my skills and create new ventures in academics. I am keen to achieve professional development to its fullest extent.

TEACHING EXPERIENCE: 08 years +

Since 19 February 2014: **Assistant Professor (Full time & Permanent)**: Department of Electronics & Communication Engineering, University of Engineering & Management, Jaipur, Rajasthan

SUBJECT INTEREST:
- Microelectronics & VLSI Designs
- Signals & Systems

RESEARCH INTEREST:

- Nanocomputing using QCA
- Beyond CMOS devices

NPTEL CERTIFICATION & MENTORING:

- CMOS digital VLSI Design (All India topper)
- Control System
- Signals & Systems

CURRENT DESIGNATION:

Assistant Professor (Full time & Permanent): Department of Electronics & Communication Engineering, University of Engineering & Management (UEM), Jaipur, Rajasthan, www.uem.edu.in.

RESEARCH PROFILE:
GOOGLE SCHOLAR: https://scholar.google.co.in/citations?user=ZyhUbWkAAAAJ&hl=en
RESEARCH GATE: https://www.researchgate.net/profile/Angshuman_Khan2
ORCiD: https://orcid.org/0000-0002-1298-628X
Web of Science Researcher ID: ABD-7146-2020
Scopus Author ID: 56498193400

THESIS DETAILS:

Degree	Thesis title	Department	Specialization	Supervisor
Ph. D.	Quantum dot Cellular Automata based Circuits Design and Analysis for Nanocomputing	ECE	Nano-Computing	Dr. Rajeev Arya
M. Tech.	Designing of Binary wire, Inverter, Level-Shifter and Counter in Quantum dot Cellular Automata	ECE	Microelectronics & VLSI Design	Dr. Ratna Chakrabarty
B. Tech.	Traffic Signal Control using Analog Electronics Components	ECE	ECE	Prof. Ishita Banerjee

GATE:

Year	Marks	Status	Score	Rank
2011	27.33	Qualified	350	19581

INDRUSTRIAL TRAINING:

Sl. No.	Name of the Company	Duration		Topics
		From	To	
1.	BSNL	21.06.2010	02.07.2010	Mobile Communication
2.	Rifle Factory, Ishapore	04.01.2010	16.01.2010	Electronic features of CNC Machine

SUBJECTS TAUGHT:

- Signals & Systems (B. Tech.): Theory & Laboratory
- Microelectronics & VLSI Designs: Theory (B. Tech.)
- VLSI Designs: Laboratory (B. Tech.)
- Basic Electronics-II (B. Tech.): Theory and Laboratory
- Control System (B. Tech.): Theory and Laboratory
- Telecommunication System: Theory (B. Tech.)
- Digital IC Design: Theory (M. Tech.)
- Quantum & Nano Science: Theory (M. Tech.)

FEW ADMINISTRATIVE/OTHER RESPONSIBILITIES:

- Departmental routine monitoring
- Departmental Minutes of meeting maintaining
- Departmental academic council member
- Students mentoring
- Technical committee member of core group IEM-UEM conferences
- Robotics coordinator of every technical-fest

SEMINAR ATTENDED:

- 02 August 2017-03 August 2017: "Water Budgeting and Management at Local Level", Govt. of India & UEM, Jaipur.

CONFERENCE SESSION CHAIR:

- 7th International Conference on Computing in Engineering and Technology **(ICCET 2022) at Dr. Babasaheb Ambedkar Technological University, Maharashtra.**

CONFERENCE ATTENDED:

- International Conference on Computation and Communication Advancement (*IC3A-2013)* **at JIS College of Engineering, Kalyani, Nadia.**

- International Conference on Information Systems Design and Intelligent Applications **(INDIA2015) at University of Kalyani, Kalyani, Nadia.**

- International Conference on Computing, Power and Communication Technologies **(GUCON2018) at Galgotias University, Noida, India.**

WORKSHOP ATTENDED

- 13 August 2017: "Indo-Australia workshop on nano-structured materials for energy storage applications", Manipal University, Jaipur.

- 26 August 2016-27 August 2016: "Nanofabrication technologies", MNIT, Jaipur.

WORKSHOP/SEMINAR COORDINATED

- 14 March 2014-15 March 2015: "PCB and Analog electronics designing", UEM, Jaipur.

RECENT FACULTY DEVELOPMENT PROGRAMME (FDP) ATTENDED:

- 08 October 2018-12 October 2018, "Value & Ethics at Work Place", UEM, Jaipur.

- 12 August 2017-25 August 2017, "SWOT Analysis", NITTTR, Chandigarh & UEM, Jaipur.

- 14 July 2017-28 July 2017: "Energy, Environment and Sustainable Development", NITTTR, Chandigarh & UEM, Jaipur.

- 13 January 2016: "Nanoelectronics: NEMS &MEMS", UEM, Kolkata.

- 01 July 2015-03 July 2015: "Teaching Methodology & Pedagogy", UEM, Kolkata.

- 01 July 2014-03 July 2014: "Teaching Methodology", IEM, Kolkata.

TECHNICAL/REVIEWER COMMITTEE MEMBER:

- Reviewer of Defence Science Journal (SCI)

- Reviewer of Silicon (SCI)

- Reviewer of Telecommunication Systems: Modelling, Analysis, Design and Management (SCI)

- Reviewer of International Journal of Electronics (SCIE)

- Reviewer of International Journal of Numerical Modelling: Electronic Networks, Devices and Fields (SCIE)

- Reviewer of Concurrency and Computation: Practice and Experience (SCIE)

- Reviewer of The Journal of Supercomputing (SCI)

- Reviewer of Engineering Research Express (SCOPUS, ESCI)

- Reviewer of Semiconductor Science and Technology (SCI)

- Reviewer of International Journal of Communication Systems (SCI)

- Reviewer of ACM Journal on Emerging Technologies in Computing Systems (SCIE)

- Reviewer of IET Circuits, Devices and Systems (SCI)

- Reviewer of Advances in Science, Technology and Engineering Systems Journal (ASTESJ) (SCOPUS)

- Reviewer & Conference Technical Committee member, 2nd International Conference on MEMS, Nanotechnology and Precision Engineering (ICMNPE 2018), Beijjing, China, 25 May2018-27 May 2018.

- Reviewer & Conference Technical Committee member, International Conference on Mechanical Engineering and Design (ICMED 2018), Langkawi, Malaysia, 23 March 2018-25 March 2018.

- Reviewer & Conference Technical Committee member, 5th International Conference on Nanomaterials and Materials Engineering (ICNME 2018), Langkawi, Malaysia, 23 March2018-25 March 2018.

- Reviewer & Conference Technical Committee member, BIT's 7th World Conference of Smart Energy-2017, Wuxi, China, 02 November2017-04 November2017.

- Reviewer & Conference Technical Committee member, Material Engineering and Advanced Manufacturing Engineering (MEAMT2017), Busan, Korea, 25 August 2017-27 August 2017.

- Reviewer & Conference Technical Committee member, 5th International Conference on Nanomaterials and Materials Engineering (ICNME 2017), Bali, Indonesia, 01 April 2017-03 April 2017.

- Reviewer, Elsevier International Conference on Recent Advancement in Air-conditioning and Refrigeration (RAAR-2016), Bhubaneswar, India, 10 November 2016-12 Noverber 2016.

- Reviewer, International Conference on Innovations in Intelligent Systems and Computing Technologies (ICIISCT 2015), Udaipur, India, 18 September 2015-20 September 2015.

- Reviewer, Springer International Conference on Computer and Communication Technologies (IC3T-2015), Hyderabad, India, 24 July 2015-26 July, 2015.

- Technical Program Committee member, Springer conferences INDIA-2015, IC3T-2015, ICICT-2015, IC4SD-2015, ICTIS-2015, India, 2017.

RECENT PUBLICATIONS (Total-43):

SCI/SCIE Journals:09 ‖ ESCI Journals: 01 ‖ SCOPUS Journals:07 ‖ Peer-reviewed Journals: 07 ‖ Book Chapters: 02 ‖ Conferences:19				
Publication details in Journals				
Title of the paper	**Authors**	**Name of the Journal**	**Indexing**	**Year**
Towards the design and analysis of multiplexer/demultiplexer using quantum dot cellular automata for nano systems	**A. Khan**, and R. Arya	**Journal of New Materials for Electrochemical Systems (accepted)**	SCIE	2022
Air quality monitoring and management system model of vehicles based on the internet of things	**A. Khan**, S. Chandra, and M. C. Parameswara	**Engineering Research Express,** 2022, doi: https://orcid.org/0000-0002-1298-628X	SCOPUS	2022
Efficient design of dual-mode nano counter: An approach using quantum dot cellular automata	**A. Khan**, and R. Arya	**Concurrency and Computation: Practice and Experience,** doi: https://doi.org/10.1002/cpe.6910	SCIE	2022
Low power pipeline-parallel phase accumulator	M. C. Parameshwara, and **A. Khan**	International Journal of Information Technology, 2022, doi: 10.1007/s41870-022-00921-0	SCOPUS	2022
Efficient design of vedic square calculator using quantum dot cellular automata (qca)	**A. Khan**, A. N. Bahar, and R. Arya	**IEEE Transactions on Circuits and Systems Part II: Express Briefs,** doi: https://doi.org/10.1109/TCSII.2021.3107630	SCIE	2021

Title	Authors	Journal/Source	Indexing	Year
Design and energy dissipation analysis of simple QCA multiplexer for nanocomputing	**A. Khan**, and R. Arya	**The Journal of Supercomputing**, doi: https://doi.org /10.1007/s11227-021-04191-8	SCI	2021
Design and energy estimation of qca based simple data path selector cum router unit for nanocommunication	**A. Khan**, and R. Arya	**IEEE China Communications,** (Accepted, yet to be published)	SCIE	2021
Towards cost analysis and energy estimation of simple multiplexer and demultiplexer using quantum dot cellular automata	**A. Khan**, and R. Arya	**International Nano Letters,** doi: https://doi.org/10.1007/s40089-021-00352-y	ESCI	2021
High performance nanocomparator: a quantum dot cellular automata-based approach	**A. Khan**, and R. Arya	**The Journal of Supercomputing**, doi: https://doi.org/10.1007/s11227-021-03961-8	SCI	2021
A design of supplementary controller for upfc to improve damping of inter-area oscillations	**A. Khan**, and U. N. thakur	**Journal Européen des Systèmes Automatisés,** doi: https://doi.org/10.18280/jesa.540212	SCOPUS	2021
Optimal demultiplexer unit design and energy estimation using quantum dot cellular automata	**A. Khan**, and R. Arya	**The Journal of Supercomputing,** doi: https://doi.org/10.1007/s11227-020-03320-z	SCI	2020
Switching loss calculation of power mosfet using the estimation technique	S. Sen, S. Saha, **A. Khan**, and R. Arya	Journal of VLSI Design Tools & Technology, doi: https://doi.org/10.37591/jovdtt.v10i1.3823	Peer-Reviewed	2020
FPGA implementation of vedic squarer for communication systems	**A. Khan**, S. Halder, S. Saha, and R. Arya	**International Journal of Sensors Wireless Communications and Control,** doi: https://doi.org/10.2174/2210327909666190611143919	SCOPUS	2020
Robust multiplexer design and analysis using quantum dot cellular automata	**A. Khan**, and S. Mandal	**International Journal of Theoretical Physics,** doi: https://doi.org/10.1007/s10773-018-3970-5	SCI	2019
Performance analysis of solar cell materials for different generations	**A. Khan** *et al.*	Current Alternative Energy, vol. 2, issue-1, pp. 27-36, doi: https://doi.org/10.2174/2405463102666180425145525	Peer-Reviewed	2018
Green telecommunication-a way forward for green world	**A. Khan**, and A. Aditya	International Journal of Smart Grid and Green Communications, vol. 1, no. 4, pp. 319-328, doi: https://doi.org/10.1504/IJSGGC.2018.095189	Peer-Reviewed	2018
Design of asic square calculator using ancient vedic mathematics	**A. Khan**, S. Halder, and S. Pal	**International Journal of Engineering & Technology**, vol. 7, issue-2.23, pp. 464-466, doi: https://doi.org/10.14419/ijet.v7i2.23.15334	SCOPUS	2018
Static hazard elimination for a logical circuit using quantum dot cellular automata	**A. Khan**, R. Chakrabarty, and D. De	**Microsystem Technologies**, vol. 23, no. 9, pp. 4169–4177,2017, doi: https://doi.org/10.1007/s00542-016-3057-2	SCI	2017
A fourier series-based template matching approach to detect the splitting of second heart sound	A. Mukherjee, and **A. Khan**	IOSR Journal of VLSI & Signal Processing (IOSRJVSP), vol. 4, no. 4, pp.9-13, doi: 10.9790/4200-04430913, July-August, 2014.	Peer-Reviewed	2014
Design of ring and johnson counter in a single reconfigurable logic circuit in quantum dot cellular automata	**A. Khan**, and R. Chakrabarty	International Journal of Computer Science and Technology (IJCST), vol. 4, no. 1, pp. 363-367.	Peer-Reviewed	2013
Design of high polarized binary wires using minimum number of cells & related kink energy calculations in quantum dot cellular automata	**A. Khan**, and R. Chakrabarty	International Journal of Electronics & Communication Technology (IJECT), Issue spl. -2, pp. 54-57.	Peer-Reviewed	2013
Novel design of high polarized inverter using minimum number of rotated cells and related kink energy calculation in quantum dot cellular automata	**A. Khan**, and R. Chakrabarty	International Journal of Soft Computing & Engineering (IJSCE), vol. 3, no. 1, pp.165-169.	Peer-Reviewed	2013

Publication details in Book Chapters

Title of the paper	Authors	Name of the Book/Chapter	Indexing	Year
Novel approach of multiplier design using	**A. Khan**, and	In: Mandal J., Satapathy S., Kumar Sanyal M.,	SCOPUS	2015

ancient vedic mathematics	R. Das	Sarkar P., Mukhopadhyay A. (eds) Information Systems Design and Intelligent Applications. Advances in Intelligent Systems and Computing, 2011 vol 340. Springer, New Delhi. doi: https://doi.org/10.1007/978-81-322-2247-7_28		
A review report on solar cell: past scenario, recent quantum dot solar cell and future trends.	**A. Khan** *et al.*	In: Lakshminarayanan V., Bhattacharya I. (eds) Advances in Optical Science and Engineering. Springer Proceedings in Physics, vol 166. Springer, New Delhi. https://doi.org/10.1007/978-81-322-2367-2_18	SCOPUS	2015

Publication details in International Conferences

Title of the paper	Authors	Name of the Conference	Year
Energy dissipation and cell displacement analysis of QCA multiplexer for nanocomputation	**A. Khan**, and R. Arya	2019 IEEE 1st International Conference on Energy, Systems and Information Processing (ICESIP), 2019, pp. 1-5, doi: 10.1109/ICESIP46348.2019.8938359.	2019
Design and analysis of temperature control system using conventional pi and advanced ANN controllers	**A. Khan** *et al.*	2018 IEEE International Conference on Computing, Power and Communication Technologies (GUCON), 2018, pp. 4-8, doi: 10.1109/GUCON.2018.8675066.	2018
Closed loop temperature control system design using conventional and advanced intelligent controller	**A. Khan** *et al.*	2018 3rd International Conference on Internet of Things and Connected Technologies (ICIoTCT), indexed in ELSEVIER-SSRN, pp. 11-14, doi: http://dx.doi.org/10.2139/ssrn.3166022,	2018
Implement and analysis of a 1-bit ternary SRAM cell using Tanner Tools	**A. Khan** *et al.*	2018 3rd International Conference on Internet of Things and Connected Technologies (ICIoTCT), indexed in ELSEVIER-SSRN, pp. 308-315, doi: http://dx.doi.org/10.2139/ssrn.3166728.	2018
Robust high speed ASIC design of a vedic square calculator using ancient vedic mathematics	**A. Khan** *et al.*	2017 8th IEEE Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2017, pp. 710-713, doi: 10.1109/IEMCON.2017.8117240.	2017
GPS based smart spy surveillance robotic system using raspberry pi for security application and remote	**A. Khan** *et al.*	2017 8th IEEE Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2017, pp. 705-709, doi: 10.1109/IEMCON.2017.8117239.	2017
A theoretical study on improved structure of microstrip antenna for better performance	**A. Khan** *et al.*	2017 8th IEEE Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2017, pp. 695-699, doi: 10.1109/IEMCON.2017.8117236.	2017
Efficient multiplexer design and analysis using quantum dot cellular automata	**A. Khan** *et al.*	2016 IEEE Distributed Computing, VLSI, Electrical Circuits and Robotics (DISCOVER), 2016, pp. 163-168, doi: 10.1109/DISCOVER.2016.7806233.	2016
Elimination of static hazard in 2:1 multiplexer using quantum dot cellular automata	**A. Khan** *et al.*	2016 IEEE Students' Technology Symposium (TechSym), 2016, pp. 229-234, doi: 10.1109/TechSym.2016.7872687.	2016
Novel approach of multiplier design using ancient vedic mathematics	**A. Khan**, and R. Das	2015 International Conference on Information Systems Design and Intelligent Applications (INDIA), 2015, pp.265-272, doi: 10.1007/978-81-322-2247-7_28	2015
Behaviors of QCA inverter due to cell displacement and temperature variation	**A. Khan** *et al.*	2015 International Conference on Nanotechnology (ICNT), 2015, ISBN: 978-81-927756-2-3, pp. 325-330, 19-22nd February, 2015.	2015
Search of appropriate semiconductor for PIN diode fabrication in terms of resistance analysis	**A. Khan** *et al.*	2015 International Conference on Recent Developments in Control, Automation and Power Engineering (RDCAPE), 2015, pp. 61-65, doi: 10.1109/RDCAPE.2015.7281370.	2015
Digital multiplier to multiply special integers using ancient vedic mathematics	**A. Khan** *et al.*	2015 International Conference on Inter Disciplinary Research in Engineering and Technology 2015(ICIDRET), 2015, ISBN: 978-81-929742-5-5, pp. 209-213, February, 2015.	2015
Green telecommunication: A review	**A. Khan** *et al.*	2015 International Conference on Telecommunication Technology & Management (ICTTM), 2015, ISBN: 978-0-9926800-5-3, p. 105, April, 2015.	2015
Layered T full adder using quantum-dot cellular automata	**A. Khan** *et al.*	2015 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), 2015, pp. 1-6, doi: 10.1109/CONECCT.2015.7383867.	2015

Elimination of static hazards in asynchronous sequential circuits using quantum dot cellular automata	**A. Khan** *et al.*	2015 International Conference on Microelectronics, Circuits and Systems (Micro), 2015, vol. II, ISBN: 81-85824-46-0, pp. 140-145, July, 2015.	2015
A review report on solar cell: past scenario, recent quantum dot solar cell and future trends	**A. Khan** *et al.*	2014 International Conference on Opto-Electronics and Applied Optics (IEM OPTRONIX), 2014, doi: https://doi.org/10.1007/978-81-322-2367-2_18	2014
Designing of a fault free inverter using minimum number of cells & related kink energy calculation in quantum dot cellular automata	**A. Khan** *et al.*	2013 International Conference on Computation and Communication Advancement (IC3A), 2013 , Published by Tata Mc-Graw Hill, pp.369-373, 11th -12th January, 2013, ISBN (13): 978-1-25-906393-0 & ISBN (10): 1-25-906393-3.	2013
Effect of temperature & kink energy in multilevel digital circuit using quantum dot cellular automata	**A. Khan** *et al.*	2012 5th International Conference on Computers and Devices for Communication (CODEC), 2012, pp. 1-4, doi: 10.1109/CODEC.2012.6509297.	2012

EDUCATION:

- **Doctorate of Philosophy, Electronics and Communication Engineering (Nano-Computing),** (National Institute of Technology Patna, Bihar)

  Status: PhD Thesis submitted (Expected degree: 2022)

- **Master of Technology, Microelectronics & VLSI Design,** (West Bengal University of Technology, West Bengal)

  DGPA: 8.89/ Percentage: 81.40% (Year: 2013)

- **Bachelor of Technology, Electronics & Communication Engineering** (West Bengal University of Technology, JIS College of Engineering, Kalyani, West Bengal)

  DGPA: 8.14/ Percentage: 73.90% (Year: 2011)

- **Higher Secondary, Science** (W.B.C.H.S.E, Tarakeswar Mahavidyalaya, Hooghly, West Bengal)

  Percentage: 73.40% (Year: 2005)

- **Secondary Exam**, **General** (W.B.B.S.E, Paschimpara High School, Hooghly, West Bengal)

  Percentage: 75.50% (Year:2003)

PERSONAL PROFILE:

FATHER'S NAME : Mr. Asit Baran Khan

MOTHER'S NAME : Mrs. Rekha Rani Khan

NATIONALITY : Indian

DATE OF BIRTH : 22 March 1988

MARITAL STATUS : Married

SPOUSE NAME : Mrs. Priyanka Bag Khan

DOMICILE ADDRESS : Vill-Masinan, PO-Saidpur, Dist-Hooghly, PIN-712415

LANGUAGE KNOWN : English(S/R/W), Hindi(S), Bengali(S/R/W)

References:

1. Prof. (Dr.) Rajeev Arya, Assistant Professor, Dept. Of ECE, National Institute of Technology, Patna, rajeev.arya@nitp.ac.in
2. Prof. (Dr.) Indranath Sarkar, Associate Professor, Dept. of ECE, JIS College of Engineering, Kalyani, India, indranath.sarkar@jiscollege.ac.in
3. Prof. (Dr.) Arnab Hazra, Assistant Professor, Birla Institute of Technology and Science Pilani, arnab.hazra@pilani.bits-pilani.ac.in
4. Dr. Suman Kumar Samanta, Scientist C, Dept. of Bio-chemistry, Institute of Advanced Study in Science and Technology, Guwahati, suman_samanta699@yahoo.co.in

I hereby declare that all the above statements are true to my knowledge.

(Angshuman Khan)

18-April-2022   Jaipur, India