DR. SUBODH WAIRYA
PROFESSOR

Department of Electronic & Communication Engineering (**NBA Accredited**)
Institute of Engineering & Technology, Lucknow **(NAAC 'A+')**
(An Autonomous Constitute Institute of Dr. A. P. J. Abdul Kalam Technical University, Lucknow, India)

1. **FATHER'S NAME** : Shri Prem Prakash Wairya
2. **ADDRESS FOR CORRESPONDENCE** : Subodh Wairya, Type –IVA/ A102, Institute of Engineering and Technology Campus, (IET), Sitapur Road, Lucknow- 226021, India.
3. **DATE OF BIRTH** : **17th March, 1970**
4. **EMAIL** : **swairya@gmail.com, subodh.wariya@ietlucknow.ac.in**
5. **CONTACT NO** : **+91 9044039593, +91 9415159085**
6. **PAN No./HIGH SCHOOL Certificate** :AADPW3496R/0404752/VB158165/529234962969 TDQ5906094

7. EDUCATIONAL QUALIFICATIONS:

S.N	QUALIFICATIONS	SUBJECT	YEAR	DIV	% of Marks	COLLEGE/UNIV
1.	Ph.D	Electronics Engineering (**Quality Improvement Program**)	2012		9.5 CPI	MNNIT, Allahabad, Uttar Pradesh, India
2.	M. E.	Tele-Communication Engineering (**Quality Improvement Program**)	2002	1st	85%	Jadavpur University, Kolkata, India
3.	B. TECH.	Electronics Engineering	1993	1st	73.1%	HBTI, Kanpur, Uttar Pradesh, India
4.	INTERMEDIATE	Hindi, English, Mathematics, Physics, Chemistry	1988	1st	70.1%	U.P.BOARD
5.	HIGH SCHOOL	Hindi, English, Math Science, Social Science, Biology,	1986	1st	70.2%	U.P.BOARD
	PUBLICATIONS	Journals ❖ IEEE Xplore Digital Library ❖ Book Chapter (Lecture Note) ❖ International Conference ❖ National Conference Book	88 26 30 17 10 03		84 SCI/ SCOPUS	**Total 176**
	PhD Registered M.Tech (Thesis)	**09 (Awarded) 04 (in Process)** **47 (Guided) 03 (in Process)**				**15** **50**

WORKS EXPERIENCE: 32 years

(a) Teaching: (30 Years) Institute of Engineering and Technology (I.E.T), Lucknow, U.P**.**

Designation	: **PROFESSOR**
Period	: From **12th Dec 2012**- till Date
Pay Scale	**Basic Pay 2,11,800=00** (1st July 2026) 7th Pay Band (14 Level) Pay Band **(Rs.144200-218200) 7th CPC AGP- 10000/-** Pay Band (37,400- 67,000) 6th CPC Grade Pay 10000)
Designation	: **ASSOCIATE PROFESSOR**
Period	: From 6th May 2009 to 11th Dec 2012
Pay scale	: 37,400- 67,000 Grade Pay 9000)
Designation	: **ASSISTANT PROFESSOR**
Period	: From 6th May 2006- 5thMay 2009
Pay scale	15600 - 39100 Grade Pay 8000)
Designation	: **ASSISTANT PROFESSOR** (Lecturer /Sr. Lecture)
Period	: From 5th May 1996- 5thMay 2006

(b**) Research &Industry: 2 years 6 months**

Defence Research & Development Organization (DRDO), Lucknow (One Year)

Period	: From January, 1995-January, 1996
Designation	: Scientist "B" Adhoc (One Year)
Responsibilities	: Certification and Design Projects

Hindustan Aeronautical Limited, Lucknow (One Year)

Period	: From January, 1994-January, 1995 (one year)
Designation	: Graduate Engineer under Consultancy Project
Responsibilities	: Design Project

(c**) Teaching: 6 months**

Govt. Polytechnics, Lucknow (Six Months)

Period	: From August 1993-January, 1994 (6 Month)
Designation	: Guest Faculty
Responsibilities	: Teaching

Research:

- **Ph.D on (Thesis)** "**Performance Evaluation of High Speed Low Power CMOS Full Adder Circuits For Low Voltage VLSI Design** from Motilal Nehru National Institute of Technology (MNNIT), Allahabad, U.P., India (2012).
- **M.Tech Dissertation on (Thesis)** "**Some Study on Polarization Properties in Single-Mode Fiber and Passive Component**" from Jadavpur University, Kolkata, India, 700032.

Books:

1. **A Simplified Approach to Telecommunication and Electronic Switching Systems,** C.B.L. Srivastav, Neelam Srivastava & Subodh Kumar Wairya, Published by Dhanpat Rai and Company**.**
2. **Design and Testability of Diverse Reversible Error Control Circuits**, Neeraj Kumar Misra, Subodh Wairya, Bibhash Sen, LAP Lambert Academic Publishing German, August 2017, Pages 107, DOI: 978-620-2-01508-0.
3. **Intelligent Systems and Smart Infrastructure** Proceedings of ICISSI 2022, Edited By Brijesh Mishra, Rakesh Kumar Singh, Subodh Wairya, Manish Tiwari, **Pages 774, 2023, CRC Press, Taylor &Francis Group, ISBN 9781032412870.**

PARTICIPATION IN

ACADAMIC ACTIVITIES

INSTITUTE ACTIVITES

DEPARTMENTAL ACTIVITES

TECHNICAL UNIVERSITY ACTIVITIES

ACADAMIC ACTIVITIES:

(a) SHORT TERM COURSES:

1. Workshop on "**Active Learning, Autonomy, Academic Governance and R & D**", 02-06 July 2018, organized by IIT Roorkee.
2. TEQUIP II Sponsored Faculty Development Programme (FDP) on "Internet of Things" Conducted by ESCI, The Institution of Engineers (India) Engineering Staff College of India (ESCI) Hyderabad, held on 06- 10th March 2017 (One Weeks).
3. AICTE Sponsored Short Term Course on "Cyber Crime & Forensic Tools Through ICT" ,**Jan. 27th– 31st Jan 2014 (One Week)** organized by the Department of Computer Science, NITTTR Chandigarh, India.
4. Faculty Development Training Programme Entitled "Cadence Tool Training Course for India-Chip 2010 Tapeout", organized by Department of Electrical Engineering IIT Kanpur, and held on **29th June to 4th July 2009 (One Week).**
5. AICTE(MHRD) Sponsored Faculty Development Programme on "Issues & Design of Distributed system and its Application" **Jan.27th–Feb. 7th 2009, (Two Week)** organized by the Department of Computer Science and Engineering, Motilal Nehru National Institute of Technology (MNNIT), Allahabad, India
6. AICTE(MHRD) Sponsored Faculty Development Programme on "VLSI for Signal Processing & Communication" **January 12–24, 2009 (Two Week)** organized by the Department of Electronics and Communication Engineering, Motilal Nehru National Institute of Technology (MNNIT), Allahabad, India
7. Short Term Course on "Wireless Networks" **May 23-28, 2005, (One week)** conducted by G.S. Sanyal School of Telecommunication, IIT, Kharagpur.
8. AICTE-ISTE Short Term Course on "Recent Advance in Power Semiconductor Devices and Their Application" **July 01-12, 2002, (Two Week)** organized by the Department of Electrical Engineering, Delhi College of Engineering, Delhi
9. U.G.C. Sponsored refresher Course on "Computer Aided Design of VLSI Circuits" **March 07-27, 2001, (Three Week)** organized by the Department of Electronics &Telecommunication Engineering, Jadavpur University, Kolkata, India

Workshop/Seminar/Conferences as Resource Person

S. No.	Topic of Course	Place	Date
1.	National Conference on "Emerging Technology and Trends in IT 2007 (NCET 2007)"	ITS, Ghaziabad	December 06th -07th , 2007
2.	National Seminar on "Nanostructures and Devices"	Invertis Institute of Engineering and Technology, Bareilly	April 7th -8th , 2007
3.	Workshop titled "VLSI Design Tools"	Department of Electronics Engineering, Institute of Engineering and Technology, Lucknow	November 17th -18th , 2007
4.	National Seminar on "Recent Trends on Digital Communication"	Invertis Institute of Engineering and Technology, Bareilly	February 2nd -3th , 2008
5.	Workshop titled "Workshop on Practical on MATLAB for B.Tech Courses	Department of Electronics Engineering, Institute of Engineering and Technology, Lucknow	April 8th -10th , 2008
6.	Workshop titled "Practical Workshop on Embedded System Designs Based on Micro controllers"	Department of Electronics Engineering, Institute of Engineering and Technology, Lucknow	February 28th -29th , 2008
7.	Workshop on "Curricula Review for B.Tech Electronics and Communication Engineering"	Department of Electronics, Institute of Engineering and Technology, UPTU,	June 15th -16th, 2015

WORKSHOP

1. Workshop on Hardware Implementation of Embedded System Design, IoT Development and DSP Application (HIEID-2019), 19th – 20thSeptember, 2019, EC Deptt IET, Lucknow.
2. Workshop ON Microcontroller Based System Design, 20th September, 2019, EC Deptt IET, Lucknow.
3. TEQUIP III sponsored Workshop on "Renewable Energy and Environment" conducted by Department of Chemical Engineering, Institute of Engineering & Technology Lucknow, Uttar Pradesh on 27th February,2018.
4. Workshop on "Advances in Chemical Engineering and Technology" conducted by Department of Chemical Engineering, Institute of Engineering & Technology Lucknow, Uttar Pradesh on 23rd-24th March,2018.
5. TEQUIP II Sponsored Faculty Development Programme (FDP) on "Pedagogy and Management Capacity Enhancement Program For Teaching Staff" Conducted by ESCI, The Institution of Engineers (India) Engineering Staff College of India (ESCI) Hyderabad, held on 17-19th March 2017
6. Attended NBA Oriented Workshop on Outcome Based Education and Accreditation for Programme Evaluators (PEVs), organized by IIT Kanpur, Uttar Pradesh, India 1st Oct 2016.
7. **Attended NBA Workshop on "SAR Filling through Active Instructional Methods"** organized by Engineering Staff College of India (ESCI) Hyderabad in Collaboration with Institute of Engineering & Technology, Lucknow, held on 12-13 August 2016
8. **Attended National Workshop on "Outcome based Education & NBA Accreditation"** organized by State Project Facilitation Unit (SPFU) Uttar Pradesh in Collaboration with Engineering Staff College of India (ESCI) Hyderabad, held on 01-03 July 2016
9. Attended Workshop on "Curricula Review for B.Tech Electronics and Communication Engineering" organized by Department of Electronics, Institute of Engineering and Technology, UPTU, Under Technical Education Quality Improvement Program (TEQIP), held on 15th -16th June, 2015
10. Attended Workshop on "Industry Academia Interaction on Frugal Engineering" organized by Institute of Engineering and Technology, Gautama Buddha Technical University, Lucknow, held on 26th October, 2013.
11. Attended Workshop on "E-WASTE MANAGEMENT- CHALLENGES, PROSPECTES AND STRATEGIES" organized by PHD Chamber of Commerce and Industry in association with Ministry of Environment and Forests, Government of India, held on 26th September, 2013.
12. Attended Workshop on "Industry Academia Interaction for Innovation and Quality Technical Education: A Path Forward for 2020" organized by Institute of Engineering and Technology, Gautama Buddha Technical University, Lucknow, held on 04th September, 2013.
13. Attended Workshop on "REAL TIME SIMULATION" organized by Department Of Electrical Engineering, I.E.T., Lucknow, India held on 26th September, 2011.
14. Attended Workshop on "Virtual Instrumentation & Its Applications (WVAI 09)" organized by Department of Electrical Engineering, MNNIT Allahabad, India held on 18th -20th March ,2009
15. Organized & attended a Workshop titled "Workshop on Practical on MATLAB for B.Tech Courses organized by Department of Electronics Engineering, IET Lucknow, India held on 8-10th April, 2008.
16. Organized & attended a Workshop titled "Practical Workshop on Embedded System Designs Based on Micro controllers" organized by Department of Electronics Engineering, IET Lucknow, India held on February 28-29th, 2008.
17. Organized & attended a Workshop titled "VLSI Design Tools" organized by the Department of Electronics Engineering, Institute of Engineering and Technology, Lucknow, India on 17-18 Nov. 2007.
18. Attended Workshop on "Adhoc and Sensor Networks" Organized by IIIT, Allahabad held on 17th -19th December, 2006.

Innovation Startup and Entrepreneurship work performed:

- **Innovation Gallery**: Innovation gallery is unique program under which University students are asked to share innovative idea on specific theme. In Jan 2020, students presented their idea on "Innovation on Automobile" in which six ideas are selected for prototype development.
- **Innovation Gallery**: Innovative ideas were invited under the UP government scheme One District One Project, in which 157 ideas were received from students. After screening 14 ideas were shortlisted for prototype development.
- **DST – NIMAT Programs:** Entrepreneurship Institute of India (EDII), Ahemdabad sanctioned two Entrepreneurship Awareness Camp (EAC) programs to University. These programs were successfully organized in September – October 2019 and Post Project Report (PPR) and UC submitted to EDII. These programs were sponsored by Department of Science and Technology (DST), Government of India.
- **Organised Aatmnirbhar Bharat Abhiyaan e-lecture series:** To aware and strengthen students for entrepreneurship University started Aatmnirbhar Bharat Abhiyaan e-lecture series in the time of covid – 19 pandemic. The motive of this series was to connect students with Vocal for Global initiative.
- **Reviewer (**Technical Program Committee member) **for some reputes (**International Journals): The Journal of Supercomputing, Journal of Computing and Digital Systems, Electronics Letter, Journal of Engineering Research and Reports, Int. J. of Circuits and Architecture Design (Inderscience Publishers Ltd), International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, Optical and Quantum Electronics, etc
- Reviewer and Program/Advisory Committee, Technical Program Committee (TPC) member of International Conferences

S. No.	Title of Conference	Place	Date
1	International Conference on Sustainable AI for Social Impact and Global Development (SASIGD)	Chaitanya Bharathi Institute of Technology (CBIT), Hydrabad, India	August 13-14 2026
2	IEEE 6th International Conference on Multimedia, Signal Processing and Communication Technologies (IMPACT-2026)	AMU, Aligarh Musilam University, Aligarh, U.P. India	Feb. 14–15, 2026.
3	International Conference on Recent Developments in Cyber Security (ReDCySec-2025)	Sharda School of Computing Science & Engineering, Sharda University,32,34, Knowledge Park III, Greater Noida, U. P. 201310	Dec.19-20, 2025.
4	IEEE 3rd International Symposium on Sustainable Energy, Signal Processing, and Cybersecurity (iSSSC2025)	GIET University, Gunupur, Odisha	Nov. 06 - 08, 2025
5	4th International Conference on Computer Vision and Machine Intelligence CVMI	National Institute of Technology (NIT), Rourkela, Odisha, India - 769008	Oct. 12-13 2025
6	5th International Conference on Electrical and Electronics Engineering, ICE3-2025,	Madan Mohan Malaviya University of Technology (MMMUT), Gorakhpur, Uttar Pradesh	Sept. 19-20, 2025
7	International Conference On Integrated Circuits, Communication, and Computing Systems (ICIC3S) 2024	School of Electronics, Indian Institute of Information Technology (IIIT), Uno	March 2-3, 2024
8	Second International Conference on Advances in Computational Intelligence and Communication CIC 2023	Puducherry Technological University, Puducherry	Dec 7-8, 2023
9	International Conference on Signal Processing & Integrated Networks (SPIN) (Technical Program Committee member)	AMITY University Noida, U.P. India	2025-2014

10	8th INTERNATIONAL CONFERENCE ON SIGNAL PROCESSING AND COMMUNICATION (ICSC 2022)	JIIT Noida, U.P. India	Dec 1-3, 2022
11	International Conference on VLSI, Communication and Signal Processing (VCAS) (Technical Program Committee member)	MNNIT, Prayagraj, U.P. India	2024-2019
12	5th International Conference on Multimedia, Signal Processing and Communication Technologies (IMPACT 2022)	AMU, Aligarh Musilam University, Aligarh, U.P. India	Nov. 26-27, 2022
13	AICTE Sponsored 2nd International conference on Advancement in Electronics & Communication Engineering (AECE-2022)Program Committee member	Raj Kumar Goel Institute of Technology (RKGIT) Ghaziabad, Uttar Pradesh, India	July 14-15, 2022
14	International Conference on Intelligent Systems and Smart Infrastructure (ICISSI 2022) Program Committee member	Shambhunath Institute of Engineering and Technology, Prayagraj UP India,	May 21-22, 2022
15	International Conference On VLSI & Microwave and Wireless Technologies (ICVMWT-2021), MMMTU, Gorakhpur, India, 20-21 March. 2021 (subreviewer) https://login.easychair.org/conferences/review_requests?a=25970358	Madan Mohan Malaviya University of Technology (MMMUT), Gorakhpur, Uttar Pradesh	March 20-21, 2021
16	Organized (Coordinator) International Conference on "Defence and Space Technologies (ICDST) 2019 by Department of Electronics & Communication Engineering, Institute of Engineering & Technology, Lucknow, 23-25 August 2019. https://www.ietlucknow.ac.in/sites/default/files/mag/conference%20-%20icdst%202019%20leaflet.pdf	Institute of Engineering & Technology, Lucknow, UP, India	August 23-25 2019
16	International Conference on VLSI, Communication and Signal Processing (VCAS 2019) (subreviewer) https://login.easychair.org/conferences/review_requests?a=23038920	MNNIT Allahabad, India	2021 - 2019
17	International Conference on " Defence and Space Technologies (ICDST) 2019 ICDST 2019 (subreviewer) https://login.easychair.org/conferences/review_requests?a=22948676	Institute of Engineering & Technology, Lucknow, UP, India	August 23-25 2019.
18	International Conference- Confluence 2013: The Next Generation Information Technology Summit (Confluence 2014)	AMITY University Noida	2016-2014
19	International Conference on Medical Imaging, m-Health and Emerging Communication Systems (MedCom-2014)	GL Bajaj Institute Gr. Noida	Nov. 7-8 2014
20	1st International Conference on Next Generation Computing Technologies (NGCT 2015)	University of Petroleum & Energy Studies, Dehradun	Sept. 4-5 2015

PARTICIPATION IN **CONFERENCES/SEMINAR**

1. **IETE International Conference on Computing, Communication and Intelligent Systems (ICCCIS-2025) as Guest of Honor,** organizing an International Conference on Computing, Communication and Intelligent Systems, ICCIS-2025, in collaboration with Amity School of Engineering & Technology, AUUP, Lucknow on 20th & 21st March 2025.
2. Co-coordinator for the All India GREENS Seminar, 4th and 5th of February 2025 jointly organized by Institute of Engineering and Technology, Lucknow in collaboration with The Institution of Engineers (India) (IEI) ET Division.
3. Session chair, All India GREENS Seminar, 4th and 5th of February 2025
4. **Best Paper Award**, Paper title "Performance analysis of various fast and low power dynamic comparators", International Conference on Intelligent Systems and Smart Infrastructure (ICISSI 2022) India, 21-22 May, 2022 at Shambhunath Institute of Engineering and Technology, Prayagraj UP India.
5. General-chair, International Conference on Intelligent Systems and Smart Infrastructure (ICISSI 2022) Organized by Shambhunath Institute of Engineering and Technology, Prayagraj UP India, Institute of Engineering and Technology (IET) Lucknow, U.P India, and Manipal University Jaipur, Rajasthan India, CRC Press, 21-22 May, 2022
6. Conference Co-chair, First International Conference on Advances in Computing and Future Communication Technologies ICACFCT-2021 Organized by Meerut Institute of Engineering & Technology and ACIC MIET, 16-17 December, 2021.
7. Advisory Committee member in International Conference on Modern Approaches in Engineering, Science and Management (MAESM-2021) Organized by Bansal Institute of Engineering and Technology, Lucknow, India, 16-17 April 2021.
8. **Best Paper Award**, Paper title "A Cost efficient QCA RAM cell for Nanotechnology Applications", International Conference On VLSI & Microwave and Wireless Technologies (ICVMWT-2021), 20-21 March. **2021 at** MMMTU, Gorakhpur, India.
9. **Presented a paper**, "An Efficient QCA Vedic Multiplier for Nanotechnology applications", IEEE 2021 The International Conference for Intelligent Technologies, (CONIT 2021), The KLE Institute of Technology, Hubballi, Kartakata , India, 25-27 June, 2021
10. **Presented a paper** "Performance Improvement and Comparative Analysis of Memristive Emulator Networks", IEEE 2nd International Conference on Emergining Technologies (IEEE INCET2021), Belguam, Karnataka,, India, 21-23 May 2021..
11. **Organized (Coordinator)** International Conference on "Defense and Space Technologies (ICDST) 2019 by Department of Electronics & Communication Engineering, Institute of Engineering & Technology, Lucknow, 23-25 August 2019.
12. **Organised (Co-ordinator)** National Conference "Emerging Trends in Electrical & Electronics Engineering (NCETEEE'16), by Department of Electronics & Communication Engineering & Department of Electrical Engineering Institute of Engineering & Technology, Lucknow, 19-20 August, 2016.

13. Attended and Programme Technical Committee member in International Conference on "Signal Processing and Integrated Network (SPIN-2015)," organized by Department of Electronics Engineering, AMITY University, Uttar Pradesh, India Feb. 2015
14. Associate as Programme Technical Committee member in International Conference on "Medical Imaging m-Health & Emerging Areas in Communication Systems (MEDCOM-2014), "organized by G.L. Bajaj Institute of Technology & Management, Gr. Noida, Uttar Pradesh, India proposed dates 7th-8th Nov. 2014
15. Associated as Programme Technical Committee member in International Conference on "Signal Processing and Integrated Network (SPIN-2014)," organized by Department of Electronics Engineering, AMITY University, Uttar Pradesh, India 20-21st Feb. 2014
16. Attended and Programme Technical Committee member, 4th International Conference on "The Next Generation Technology Summit (CONFLUENCE-2013)," organized by Department of Computer Science& Engineering, AMITY University, Uttar Pradesh, India 26-27th Sept. 2013.
17. Attended International Conference on Advance in Electrical & Electronics Engineering, (ICAEEE–2011), organized by Department of Electronics & Electrical Engineering, MIT, Moradabad, 25-26th Feb. 2011.
18. Attended 1stInternational Conference on "Power, Control & Embedded Systems (ICPCES 2010), organized by Department of Electrical Engineering, Motilal Nehru National Institute of Technology Allahabad, India, held on Nov. 29-Dec. 1, 2010.
19. Attended National Seminar on "Recent Trends on Digital Communication" organized by Invertis Institute of Engineering and Technology, Bareilly, held on February 2-3, 2008.
20. Attended International Conference on Ayurvedic Bhasm and Nanomedicine, organized by OMICS BIOTECHNOLOGY, USA, ACS-BIOINFORMATIC, Biotech Park, Lucknow, 22nd Dec. 2007.
21. National Conference on "Emerging Technology and Trends in IT 2007 (NCET 2007)" organized by ITS, Ghaziabad, held on 06-07 December, 2007.
22. National Seminar on "Nanostructures and Devices" organized by Invertis Institute of Engineering and Technology, Bareilly, held on April 7-8, 2007.
23. Attended 2nd International Conference on "Wireless Communication and Sensor Networks (WCSN)" organized by IIIT, Allahabad held on 17-19 December, 2006.
24. Attended International Conference on "Fiber Optics and Photonics" Advance Technology Center IIT Kharagpur, India and Department of Applied Physics University of Calcutta held on 18-20 December,2000

INVITED LECTURE TALK & CHAIRING A TECHNICAL SESSION:

1. Invited Lecture talk on "VLSI Next-Gen Innovation Trends in Communication Systems", 20th Jan. 2026 in 5-day Online Short Term Course (STC) on "**Next Gen Pathways in VLSI and Communication Systems**" from **19th to 23rd Jan. 2026**. under the aegis of Department of Electronics Engineering, National Institute of Technology, Uttarakhand.
2. Invited Lecture talk on 2nd Feb 2024 **"How 5G Technology Impacts the Semiconductor Industry"** in one-week short term course (STC) **in online mode** on "**Future Communications Technologies: 5G & Beyond**" during January 29th to February 3rd, 2024, under the aegis of Department of Electronics Engineering, National Institute of Technology, Uttarakhand.
3. Invited Lecture talk on **"Era of Semiconductor Chip, 5G Revolution in Next Generation Technology"** in one-week short term course (STC) **in online mode** on " Cutting-Edge Technologies, Innovations & Applications" during January11th-15th March, 2024, under the aegis of Department of Electronics and Communication Engineering SOET, CMR University, Lakeside Campus Hennur- Bagalur Main Road, Chagalahatti, BANGALORE, Karnataka, INDIA, on 12th March 2023.
4. Invited Lecture talk on **"MEMS & Digital Design in VLSI Application"** in five day online Faculty Development Programme (FDP) on " **Recent Trends of Emerging Research Advances in Design Aspects and Innovative Modeling Techniques with Miniaturization for Electronics Devices and Circuits**" from 24-28 January, 2022. The FDP is sponsored by Online AICTE Training and Learning (ATAL) Academy Delhi and organized by Department of Electronics Engineering, IERT Prayagraj U.P.
5. Invited Lecture talk on **"Advance Digital Circuit Design in VLSI Application** *"* in five day online Faculty Development Programme on "**Current Research Trends in VLSI design and Device Modelling**" organized by Department of ECE, Atria Institute of Technology, Bengaluru, India in association with IEEE & IETE ATRIA Student Branch chapter (24th-28th August 2021).

PARTICIPATION IN TRAINGING PROGRAM AND TUTORIALS:

1. Chairing a Technical Session on 21st March 24 for 11th International Conference on Signal Processing and Integrated Networks (SPIN2024), organizing by Department of Electronics & Communication Engineering, Amity University, Noida, India in Technical Collaboration with IEEE, on 21-22 March 2024.
2. Advisory Committee Member, Five-day online Faculty Development Programme (FDP) Integration of Renewable Energy and Smart Grids for Smart Cities 07 - 12, March 2022. The FDP is organized by Department of Electrical Engineering, Bansal Institute of Engineering and Technology, Lucknow, U.P.
3. Advisory Committee Member, Five-day online Faculty Development Programme (FDP) Data Analytics, Big Data, Machine Learning and Applications February 21 -26, Feb 2022. The FDP is organized by Department of Electrical Engineering, Bansal Institute of Engineering and Technology, Lucknow, U.P.
4. Chairing a Technical Session on 24th September for 4th International Conference on VLSI, Communication & Signal Processing (VCAS-2021), ECE Department MNNIT, Allahabad, India, Sept. 24-26, 2021

5. Chairing a Technical Session on 26th August for 8th International Conference on Signal Processing and Integrated Networks (SPIN 2021), organizing by Department of Electronics & Communication Engineering, Amity University, Noida, India in Technical Collaboration with IEEE, on 26-27 Aug 2021.
6. Invited Lecture talk in IETL online lecture series topic "Advance Digital circuit Design" organized by Department of EC, IET Lucknow and PEC Pondicherry for faculty under TEQIPIII twining activity on 13th Feb 2021.
7. Chairing a Technical Session for 3rd International Conference on VLSI, Communication & Signal Processing (VCAS 2020), MNNIT, Allahabad, October 9-11, 2020 organizing by ECE Deptt, MNNIT Allahabad, Prayagraj, Uttar Pradesh, India, on October 9-11, 2020.
8. Tutorial "MOSFET Scaling: trends, Challenges and Key Technology Innovations" organized by Department of Electrical Engineering, Motilal Nehru National Institute of Technology (MNNIT), Allahabad, India, held on Nov. 28, 2010.
9. Training Programme Entitled "ENERGY AUDITING" on March, 2006 under Technical Education Quality Improvement program at Institute of Engineering & Technology, Lucknow.
10. Workshop on "Hindi Sabdawali in Engineering Subject" organized by scientific & Technical Sabdawali Commission, MHRD Ministry, New Delhi, held on 19-20th March, 2005.
11. 88 Hours Course on "C,UNIX & DATA STRUCTURES" organized by Computer Science and Engineering Department, Jadavpur University, Calcutta, held on Sept 08-12 Dec, 2001.
12. Workshop on "Patent Awareness" organized by Patent Promotion and archival Cell, Jadavpur University, Calcutta, India held on 19th January, 2001.
13. Tutorial "PHOTONIC 2000" Organized by Advance Technology Center IIT Kharagpur, India and Department of Applied Physics University of Calcutta held on 17thDecember, 2000.
14. Presented a paper "Proposing a Novel Low Power High-Speed Mixed GDI Full Adder Topology" 1st International Conference on Power, Control & Embedded Systems (ICPCES 2010), organized by Department of Electrical Engineering , Motilal Nehru National Institute of Technology (MNNIT), Allahabad, India held on Nov. 29-Dec. 1 2010.

INSTITUTE ADMINISTRATIVE ACTIVITES: -

- **Dean Student Welfare May 2023-Till date**
- **Chief Warden May 2022-Till date**
- Member Institute Library Advisory Committee (Till date)
- Dy. Dean Academics, IET, Lucknow (Jan. 2014-Dec 2016)
- Coordinator/Nodal Officer, AICTE Sponsored Employability Enhancement Training Program (EETP) organized by Bharat Sanchar Nigam Limited (BNSL). AICTE has entered into a MoU with BSNL to facilitate the Technical Institutions (June 2013-16).
- Member Examination Committee, IET Lucknow (2014- 2016)
- Co-coordinator, Financial Management TEQIP Phase II Committee, IET Lucknow (2012-2014).
- Member INSTECH Student Sports and Cultural council (ISSACC) IET, Lucknow (2011-2015)
- Faculty Incharge Sports & Culture Activity (ISSACC) I.E.T Lucknow (2002-2008)
- Warden, VA Hostel (July 2016- Sept 2017), VB Hostel (July 2012- Feb. 2014), (97-2000), New Boys Hostel (July 2011-June 2012), (2003-2007)
- Officer Incharge National Social Service (NSS) (1998-2000),
- Officer Incharge, National Cadet Corps (NCC) 67 UP Battalion (2011-2013), (2004-2007)
- Deputy Registrar (officiating), I.E.T., Lucknow (1997-1998).
- Center Superintendent MTech/MPharma End Semester Exam (March 2014),
- Center Superintendent Special Carry Over End Semester Exam (Sep-Oct 2014)
- Assistant Center Superintendent, UPTU End Semester Exams IET Lucknow (2002-2004).
- Member Proctorial Board and Anti Ragging Committee IET, (2011-till date)

DEPARTMENTAL ACTIVITES

- **Head of Department with effect from 2nd June 2023 –Till date**
- Faculty Advisor Departmental Technical Society "Society for Electronics Exploration and Development" (SEED) EC Department, IET, Lucknow (2019-2020).

  https://www.ietlucknow.ac.in/sites/default/files/mag/Departmental%20Magazine%202019-20.pdf
- Head of Department with effect August 2016 to Oct 2019.
- Coordinator M.Tech (Microelectronics) Program. (Jan. 2016 to Sept. 2017)
- Member of Board of Studies (BOS) EC Deptt IET Lucknow (2013-till date)
- Deputy Coordinator, M.Tech (Microelectronics) Program. (2011-2015)
- Member interview committee for the interview of Contractual faculty (2011-2014)
- Faculty Advisor, IInd Year EC/EI Students.
- Incharge Contractual Gust Faculty, EC Department, IET, Lucknow
- Faculty Advisor Departmental Technical Society "Society for Electronics Exploration and Development" (SEED) EC Department, IET, Lucknow (2011-2014)

COURSE TAUGHT AT UNDER GRADUATE LEVEL (B.Tech) (1996-till date)

- Basic Electronics
- Electronics Devices and Circuits
- Analog Integrated Circuits
- Digital Logic Switching Theory
- Digital Integrated Circuit
- Signal and Systems
- Digital Signal Processing
- Principle of Communication
- Digital Communication
- Electronics Switching
- VLSI Design

UG LABORATORIES DEVELOPED/PERFORMED

- Basic Electronics Lab
- Printed circuit board (PCB) Lab
- Microprocessor Lab
- CAD Lab

COURSE TAUGHT AT POST GRADUATE LEVEL

M.Tech (Micro Electronics) Regular (July 2011-till date)

- Analog CMOS Design
- VLSI Design
- Hardware Description Language (VHDL),
- Designing with ASICS
- Electronics System Design
- Modelling of Microelectronic Devices

M.Tech VLSI Design (Modular)
Analog VLSI Design,
Low Power VLSI Design,
CMOS RF Design,

PG LABORATORIES DEVELOPED/PERFORMED

- Microelectronics Lab
- Microprocessor and Microcontroller Lab
- VLSI Lab

PARTICIPATION IN TECHNICAL UNIVERSITY ACTIVITIES:

- **Dean, Undergraduate Studies and Entrepreneurship (UGSE)**, Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh, Lucknow, India. (Sept. 2019-**30th May 2022**).
- **Coordinator Uttar Pradesh Common Entrance Test (former UPSEE), UPCET 2021.** (Dec. 2020- June 2021).
- **Convener, Virtual Lab Cell,** Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh, Lucknow, India. (https://aktu.ac.in/pdf/Upload%20Virtual%20Lab%20Cell%20Report1.pdf)
- **Incharge Kalam- Centre for Innovation and Incubation of startup (K-CIIS)** https://innovation.aktu.ac.in **till July 2021.**
- Member of Steering Committee for New Education Policy (NEP) system 2020.
- **Member of Standing Committee of Academic Autonomy for Private Institution of AKTU. (निजी संस्थानों के शैक्षिक स्वायत्ता हेतु प्राप्त आवेदनों पर विचार हेतु गठित स्टेन्डिंग कमेटी).**
- Member of AKTU MOOC Coordination Committee, affiliation committee, Autonomy Grant Committee, Internal Quality Assurance Cell (IQAC), Governing Council of Nalanda E-consortium, various Institute Inspection (Approval Process 2020-21) and Examination Committees (2019-2022)
- **Dean, Recourse Generation & Alumni Matter**. Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh, Lucknow, India, Sept. 2018- **Sept. 2019.**
- **Associate Dean, Undergraduate Studies and Entrepreneurshi**p, Dr. A. P. J. Abdul Kalam Technical University Uttar Pradesh, Lucknow, India (Jan. 2017-Sept. 2018)
- External Member RDC **Committee for Ph.D Program** of Electronics Engineering, IET, Dr. Ram Manohar Lohia Avadh Univ. Faizabad, Uttar Pradesh (2024- till date).
- External Member RDC **Committee for Ph.D Program** of Electronics Engineering, HBTU, Kanpur, Uttar Pradesh (2022- till date).
- **External Member FRC/DRC Committee for Ph.D Program, AMITY University, Lucknow (2016-till date)**
- **External Member RDC Committee for Ph.D Program, MMMUT University Gorakhpur (2022-till date)**
- **External Member RDC Committee for Ph.D Program, HBTU University Kanpur (2022-till date)**
- External Member **DRC Committee** of EC Deptt, Institute of Engineering and Technology, Ayodhya, Dr. Ram Manohar Lohia Avadh Univ. Faizabad, Uttar Pradesh (2024- till date).
- External Member **DRC Committee** of Uma Nath Singh Institute of Engineering and Technology (UNSIET), **Veer Bahadur Singh Purvanchal University (VBSPU)** campus in Jaunpur, Uttar Pradesh. (2025- till date).
- External Member of Board of Studies (BOS) EC Deptt, HBTU, Kanpur, Uttar Pradesh, India. (2023-till Date)
- External Member of Board of Studies (BOS) EI Deptt IET, Barelliy University (2013-till Date)

- External Member of Board of Studies of IET, Dr. Ram Manohar Lohia Avadh Univ. Faizabad, Uttar Pradesh (2017 till date).
- **C**hief Guest for Inaugural Session of various Faculty Development Program (FDP) organized by affiliating Institute of AKTU
- **Joint Controller of Examination,** Dr. A. P. J. Abdul Kalam Technical University (**AKTU)**, Lucknow, Uttar Pradesh, (Feb. 2015 to Jan. 2016)
- **Dy. Coordinator, Uttar Pradesh State Entrance Examination, Lucknow (UPSEE-2014**)
- Member Admission Committee M.Tech & M.Pharma, UPTU, Lucknow (2013-2014).
- Member Seat Matrix Committee, UPSEE (2013- 2014), UPTU, Lucknow
- Member of Scanning supervision Committee for UPSEE-2013
- Center Controller, State Entrance Examination (UPSEE) (2002-2008)
- Nodal Officer (Confidential), State Entrance Examination (2009-2013)
- Observer for UPSEE-2011 Counseling at Document Verification Choice Locking Center
- Member inspection committees regarding affiliation of Private Engineering Colleges (2002-2008)
- Convener of Hospitality Committee, Annual Convocation, UPTU (2005-2008).
- Member of Hospitality Committee, Annual Convocation, UPTU (2011-2014).
- Head/Dy. Examiner, Central Evaluation (UPTU) regarding Examinations (2002-2014)
- Papers Setter/Thesis Examiner for UG/PG Course of Various Universities Examination (2005-till date)
- Member Moderation Committee, Examination for Various Universities.
- Member flying Squad, End Semester Examination, UPTU (2004-2008).
- Group Leader (Flying Squad) Special Carry Over End Semester Exam UPTU (Sep 2011)
- External Member of Board of Studies (BOS) EI Deptt IET, Barelliy University (2013-2017)
- Member of Selection Committee, Allahabad University, Prayagraj UP.

Membership for Professional Societies: -

1. Life time member of Institute **of Engineers IE (M133861-1**)

   Project Guide for PG/UG/AMI Student registered from The Institute of Engineers (India), IE Kolkata (2011-till Date).

- Ashish Ranjan Srivastava (PG 41110022), "Wireless Transmitter." The Institute of Engineers (India), IE Kolkata, (2012)
- Mukesh Kumar Sahu (ST No. 509433-5), "Microcontroller based Eye Blink Sensor and Accident Prevention Device." The Institute of Engineers (India),IE Kolkata, (2013)
- Divya Khanuja (ST No. 561209-3), "Electronics Eye Controlled Security System." The Institute of Engineers (India), IE Kolkata, (2014)
- Anamika Shukla (ST No. 559386-2), "Microcontroller based Safety System for Train." The Institute of Engineers (India), IE Kolkata, (2014)
- Gopi Kant (ST No. 120177-3), "Working of 1000KW AM Medium Wave DRM (Digital Radio Mondiale) Super Power Transmitter." The Institute of Engineers (India), IE Kolkata, (2015).
- Neetu Vishwakarma (ST No. 613298-2), "Solar Tracking System & Its Application." The Institute of Engineers (India), IE Kolkata, (2016).

2. Life time member of Institute **of Electrical and Telecommunication Engineering IETE (M189081**)
3. Member Executive Committee, The Institute of Electronics Telecommunication Engineers (IETE), Lucknow Chapter, (2015-till date)
4. Life time member of **Indian Society for Technical Education** (**LM33784**)

Research & Publications

M.E. THESIS GUIDED (47)/M.TECH. THESIS UNDER GUIDANCE (3)

1. Garima Singh, "Performance Analysis of High Speed Low Voltage CMOS Full Adder Circuits, AIM&ACT, Banasthali University, Rajasthan, India. (2011-2012)

2. Divya Tripathi, "Design Analysis of High-Speed XOR/XNOR based Logic Circuits Suitable for Low Power VLSI Applications." Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan, India (2012).

3. Meenakshi Shree, "Design Analysis of Mixed Chain Full Adder Circuits for VLSI Applications," JayotiVidyapeeth Women's University, Jaipur, Rajasthan, India (2012).

4. Ritika Mishra, "Low Power Design Analysis of Array Multipliers Using Hybrid CMOS Full Adder Circuits." Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan, India (2012).

5. Sapna Dixit, "Performance Analysis of High Speed Adiabatic Digital Logic Circuits, AIM&ACT, Banasthali University, Rajasthan, India. (2012-2013)

6. Nidhi Gupta, "Realization and study of Low Power CMOS Current Feedback Amplifier "AIM &ACT, Banasthali University, Rajasthan, India. (2013-2014).

7. Rahul Verma, "Design and Analysis of Ultra Low Power SRAM Cache Memory Cell", IET, Lucknow, India (2014).

8. Monika Jain, "Study and Design of Low Power and Leakage Proof Digital Circuits", IET, Lucknow, India (2014).

9. Anjali Tiwari, Design and Performance Analysis of Dynamic Circuits using Multi-Threshold Technique for Low Power VLSI Circuits, AIM &ACT, Banasthali University, Rajasthan, India. (2015).

10. Vijata, "Design and Analysis of Different Topologies of CMOS Operational Trans-conductance Amplifier", IET, Lucknow, India (2015).

11. Archita Srivastava, "Implementation and Analysis of Adiabatic Logic Circuits." Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan, India. (2015)

12. Shivani Shukla, "Temperature Dependent Leakage Power Characteristic of Dynamic Circuit in Nanometer CMOS Technologies." Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan, India (2015).

13. Shweta Kumari, "Performance Analysis of GDI Based 1-Bit Full Adder Circuit for Low Power & High Speed Application." Jayoti Vidyapeeth Women's University, Jaipur, Rajasthan, India (2015).

14. Ravi Prakash Verma, "Filter Antenna Module using Substrate Integrated Waveguide." SRMS Barailly, Uttar Pradesh Technical University, Lucknow, India (2015).

15. Ankita Agarawal,"Cross layer optimization of Optical node in High Speed Network." M.Tech Modular, Uttar Pradesh Technical University, Lucknow, India (2015).

16. Shashank Gupta, "Design Of Hybrid Code Converters Using Modified Gate Diffusion Input Technique", IET, Lucknow, India (2016).

17. Shraddha Pandey, “Designing An Efficient JK and T Flip Flop using QCA with Power Dissipation Analysis.”, IET, Lucknow, India (2016).

18. Sonali Singh, “Modular Design Of 2n*1 QCA Multiplexers and its application Via Clock Zone based Crossover”, IET, Lucknow, India (2016)

19. Ragni Tripathi, “Design analysis of low pass GDI circuit in sub-threshold region”, IET, Lucknow, India (2017)

20. Ritesh Singh, “Implementation of non-restoring reversible divider using QCA”, IET, Lucknow, India (2017)

21. Sakshi Gupta, “Efficient design of even and odd parity generator using different XOR-XNOR modules in VLSI design circuit”, IET, Lucknow, India (2017)

22. Yogesh Singh, “Design Analysis for SRAM in Nano-Technology”, M.Tech (Modular), AKTU, Lucknow, India (2018)

23. Shahneela Jamal Kidwai, “Design of Full Adder with self checking capability using QCA”, IET, Lucknow, India (2018)

24. Bhoopendra Vikram Singh, “Contact thickness effect on mobility of Organic Thin Film Transistor and tradeoff with current on-off ratio”, IET, Lucknow, India (2018)

25. Anshu Arya, “Performance Evaluation and design implementation of SRAM Semiconductor Memory in Nanotechnology”, IET, Lucknow, India (2018)

26. Abhishek Shukla, “Designing and Performance Comparison of Parity Generators Using Various XOR-XNOR modules”, IET, Lucknow, India, (2019).

27. Prashasti, “Performance Evaluation of High Speed and Low Power Digital Circuits using Energy Efficient XOR & XNOR logic gates”, IET, Lucknow, India, (2019).

28. Shivangi Jaiswal, “Performance Evaluation of Combinational circuit based on Energy Efficient Adiabatic Logic Technology for Ultra Low-Power Applications”, IET, Lucknow, India, (2019).

29. Sana, “Implementation of MGDI and Transmission Gate Based Hybrid CMOS Full Adders Using Triplet Design Approach”, IET, Lucknow, India, (2020).

30. Priti Tripathi, “Low Power Shift Registers Using Contention Free Single-Phase Clocked Flip Flop”, IET, Lucknow, India, (2020).

31. Sweta Tripathi, “Low Power Voltage Controlled Oscillator (VCO) Using Multi-Threshold Transistors and Power gating Technique in Deep Submicron Technology”, IET, Lucknow, India, (2020).

32. Vivek Mishra, “Implementation of Process Supply Voltage and Temperature Compensated Supply Circuit for A Ring Oscillator”, IET, Lucknow, India, (2020).

33. Semba Walli, “MOSFET Based Memristor Emulator Circuit Analysis and Applications”, IET, Lucknow, India, (2020).

34. Vivek Saxena, “Power Efficient Frequency Divider Circuit for VLSI Applications”, IET, Lucknow, India, (2020).

35. Aishita Verma, “Performance Analysis of Hybrid Full Adder and Multiplier Topologies for Fast Computation”, IET, Lucknow, India, (2021).

36. Nivedita Rai, “Performance Evaluation and Analysis of Comparator Design in VLSI Application”, IET, Lucknow, India, (2021).

37. Ayushi Kirti Singh, “Design and Realization of QCA based Logic Designs”, IET, Lucknow, India, (2022).

38. Kunal Kumar, “Design of Low Power Dynamic Comparator Topologies for VLSI”, IET, Lucknow, India, (2022).

39. Mohd Saqib, “Performance Evaluation and Analysis of Differential Dual stage delay cells VCO”, IET, Lucknow, India, (2022).

40. Archana**,** Design and Analysis of Dual Source Vertical TFET with and without channel overlapped structure for Low Power Applications, IET, Lucknow, India, (2023)

41. Parikalp Gupta, Performance and Design Analysis 0f Ternary Arithmetic Logic Circuits, IET, Lucknow, India, (2023)

42. Abhinav Saxena, Energy Efficient Architectures of Dynamic Comparator for Low Power VLSI Application, IET, Lucknow, India, (2023).

43. Agyenya Anand, Performance Analysis of Fast & Power Efficient Dynamic Comparator, IET, Lucknow, India, 2024. **(in process).**

44. Akhya Pandey, Performance Analysis of Dynamic Comparator Topologies for VLSI Applications, IET, Lucknow, India, 2025.

45. Priya Singh, Performance Analysis of Low Voltage, Low Power Bulk Driven OTA for VLSI Applications, IET, Lucknow, India, 2025.

46. Garima, Singh, Design of single Event Upset (SEU) Immune Memories, IET, Lucknow, India, 2025. **(in process).**

47. Richija Srivastava, “Design Analysis of Energy-Efficient & High-Speed Dynamic Comparator Circuit” IET, Lucknow, India, 2026.

48. Harsh vardhan Shukla, “Performance Analysis of High Gain Low Power Regulated Cascode OTA Circuit, IET, Lucknow, India, 2026

49. Pratiksha Kumari, “Design and Analysis of Dual Source Pseudo Negative Capacitance GaSb/InGaAsSb/InAs Hetro-structure -based Vertical TFET”, IET, Lucknow, India, 2026

PH.D. THESIS AWARDED (09):

1. Neeraj Kumar Mishra PhD/13/ECE/1134, Design and Testability of Diverse Reversible Logic Circuits for Low cost Nanoelectronics Application, Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh (AKTU), Lucknow, India. (2017)

2. Divya Tripathi, (PHD/13/ECE/1413, "Performance Evaluation of Low Power, High Speed Arithmetic Logic Circuits in Nanotechnology," Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh (AKTU), Lucknow, India (2022)

3. Digvijay Pandey, (PHD/16ECE/2172, Performance Analysis on Text Extraction from Complex Degraded Images", Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh (AKTU), Lucknow, India. (2023)

4. Jyoti Garg, (PHD/15ECE/2055), Performance Evaluation of Non Volatile Memory for Low Power VLSI Application, Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh (AKTU), Lucknow, India. (2023)

5. Shilpi Gupta, (PHD/16/ECE/2175), Performance Investigation OF SiGe Hetero Junction Gate Stacked Triple Metal Gate Vertical TFET for Low Power Application, Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh (AKTU), Lucknow, India. (2023)

6. Raj Vikram Singh, (PHD/15/ECE/1903, DWT and Neural Network based Watermarking for Medical Image Security, Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh (AKTU), Lucknow, India. 2024.

7. Anum Khan, (PHD/17/ECE/2211, Performance Evaluation of High Speed Digital Circuits In Nanotechnology Architecture, Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh (AKTU), Lucknow, India June 2025.

8. Anurag Yadav, (PHD/19/ECE/2461, Performance Evaluation of Low Power High Speed VLSI Design and Application with Data Converter Architecture, Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh (AKTU), Lucknow, India, Jan 2026.

9. Sheetal Singh, (PHD/21/ECE/2715, Performance Investigation of Hetero-Dielectric and SiGe Heterojunction Gate Tunnel FET for Low Power Applications, Dr. A.P.J. Abdul Kalam Technical University Uttar Pradesh (AKTU), Lucknow, India, Jan. 2026.

PH.D. THESIS UNDER GUIDANCE (06):

Enrollment	Full Name	Mobile No	Email Id	Topic
20ECE2610	Sana	9140159469	sana.aliya1403@gmail.com	Low Power VLSI Circuits
21ECE2713	Preeti Tripathi	7379734552	1805267006@ietlucknow.ac.in	A Novel Cross-Latch Shift Register Scheme for Low Power Applications
23ECE2911	Rahul	8429066667	ak431033@gmail.com	Performance Analysis of OTA Based Filter Design for Analog Signal Processing
24ECE2980	Ashwani Kumar	9650374129	kashwani983@gmail.com	Design and Performance Evaluation of Fin FET with Hetro-dielectric for improve reliability
25ECE PHDADM252610443	Pragati Mishra	6393339026	mishra2016pragati@gmail.com	Design and Performance Optimization of GaN/SiC HEMTs For High Power RF Applications
26ECE	M Swetha	9948067222	swetha.m454@gmail.com	Optimization of Heterojunction Tunnel FET for Low Power Applications

PUBLICATIONS: *https://scholar.google.co.in/citations?user=d-g3yEoAAAAJ&hl=en*

PUBLICATIONS: JOURNAL

2026

1. Rahul Singh, Subodh Wairya, "Four Current Path PRFC OTA with Cross-Coupled Positive Feedback with improved gain and PSRR for Analog Signal Processing.", Journal of Circuits, Systems, and Computers (JCSC), WSPC-JCSC-D-25-01002, https://doi.org/10.1142/S0218126626500994. pp. 2650099. ISSN (online): 1793-6454
2. Anurag Yadav, Subodh Wairya, "Charge Shared based Low Power and High-Speed Dynamic Comparator for High Frequency Analog Signal Processing Architecture", Integration, Vol. 103, PP. 102426, 2025, **Online ISSN**: 1872-7522, https://doi.org/10.1016/j.vlsi.2025.102426

2025

3. Singh, S., Wairya, S. Heterojunction (SiGe/Si) triple metal dual gate extended source tunnel FET for improved DC, noise and linearity performance. Analog Integr Circ Sig Process 125, 12 (2025). **ISSN: 1573-1979** https://doi.org/10.1007/s10470-025-02492-z
4. Anurag Yadav, Subodh Wairya, "Design and Analysis of Low Power, High Speed and Sensing Small Differential Input Signal of Dynamic Comparator with Transconductance Improved Latching Stage", Journal of Circuits, Systems, and Computers (JCSC), https://doi.org/10.1142/S0218126625503657.. ISSN (online**): 1793-6454, PP. 2450198**
5. Singh, S., Wairya, S. Effect of Hetero-Dielectric Gate on Direct Current, Radio Frequency/Analog, and Linearity Performance of Dual-Source Vertical Tunnel Field Effect Transistor for Low-Power Applications. Semiconductors 59, PP. 650–660, (2025), I**SSN:1090-6479**. https://doi.org/10.1134/S1063782625600664.

2024

6. Sheetal Singh, Subodh Wairya, "Linearity and noise evaluation based analysis of extended source heterojunction double gate tunnel FET", Micro and Nanostructures, Volume 194,2024, PP. 207939, ISSN 2773-0123, https://doi.org/10.1016/j.micrna.2024.207939.(https://www.sciencedirect.com/science/article/pii/S2773012324001882). (SCIE)
7. A. Khan, S. Wairya, "Efficient and Power-Aware Design of a Novel Sparse Kogge-Stone Adder using Hybrid Carry Prefix Generator Adder," Advances in Electrical and Computer Engineering, vol.24, no.1, pp.71-80, 2024, doi:10.4316/AECE.2024.01008, Print ISSN:1582-7445 Online ISSN: 1844-7600 file:///C:/Users/User/Downloads/aece_2024_1_8.pdf. (SCIE)
8. Anurag Yadav, Subodh Wairya, "Design and Analysis of Low Power and High Speed Dynamic Comparator with Transconductance Enhanced in Latching stage for ADC Application", Journal of Circuits, Systems and Computers, PP. 2450198, .. ISSN (online): **1793-6454,** https://doi.org/10.1142/S0218126624501986. (SCIE)

2023

9. Anum Khan, Arindom Chakraborty, Upal Barua Joy Subodh Wairya Mehedi Hasan, "Carry look-ahead and ripple carry method based 4-bit carry generator circuit for implementing wide-word length adder", **Microelectronics Journa**l, pp. 105949, **Online ISSN**: 1879-2391, 2023. DOI : https://doi.org/10.1016/j. mejo.2023. 105949. (SCIE)
10. Ayushi Kirti Singh, Subodh Wairya & Divya Tripathi, "Cell Optimization and Realization of Vedic Multiplier Design in QCA", Int. J. Com. Dig. Sys. 14, No.1, pp. 10491-10503,,http://dx.doi.org/10.12785/ijcds/1401116. Dec 2023. https://journal.uob.edu.bh/bitstream/handle/123456789/5097/IJCDS1401116_1570862142.pdf?sequence=3&isAllowed=y, ISSN (2210-142X).
11. Manoj Kumar Jain, Amrita Singh and Subodh Wairya, "Configuration for a Grounded Lossy Impedance Simulator Employing CC-CFAs and Grounded Passive Elements", Serbian Journal of Electrical Engineering, Vol. 20, Issue 2, Page 147-162 (2023), Publisher Faculty of Technical Sciences Cacak. https://doi.org /10.2298/ SJEE2302147J. EISSN: 2217-7183,
12. Jyoti Garg, Subodh Wairya, "Design of Low Power Arithmetic logic unit using SHE assisted STT / MTJ, International Journal of Computing and Digital Systems Int. J. Com. Dig. Sys.14, No.1 (Jul-23), pp. 107-115, July, 2023, ISSN (2210-142X). DOI: http://dx.doi.org/10.12785/ijcds/140110
13. Raj Vikram Singh, Subodh Wariya Rajiv Kumar Singh, "DWT-SVD Based Robust Watermarking Technique for Secure Medical Image Diagnosis", Journal of Survey in Fisheries Sciences, vol. 10 no. 3S (2023) Special Issue 3, pp. 1087-1098, 2023. DOI: https://doi.org/10.17762/sfs.v10i3S.118, Online ISSN: 2368-7487
14. Raj Vikram Singh, Subodh Wariya, Rajiv Kumar Singh, "Watermarking Scheme for Medical Images with Enhanced

Robustness based on Discrete Wavelet Transform and Neural Network", Journal of Data Acquisition and Processing, , vol. 38 no. 2, pp. 1234-1246, April 2023.DOI: https://doi.org/10.5281/zenodo.77670. ISSN 1004-9037

15. Aishita Verma, Anum Khan, Subodh Wairya, "Design and Analysis of Efficient Vedic Multiplier for Fast Computing Applications", Int. J. Com. Dig. Sys., Vol. 13, Issue 1, pp. 190-201, 2023. ISSN (2210-142X). DOI: http://dx.doi.org/10.12785/ijcds/130151
16. Digvijay Pandey, Subodh Wairya, "An optimization of target classification tracking and mathematical modelling for control of autopilot", The Imaging Science Journal, Taylor & Francis, Vol. 70, Issue 6, pp. 371-386, 2023. DOI: https://doi.org/10.1080/13682199.2023.2169987, **Online** ISSN: 1743-131
17. Mohd Saqib, Subodh Wairya and Anurag Yadav, "A 6.7GHz, 89.33 µW power and 81.26% tuning range dual input ring VCO with PMOS varactor", Journal of Circuits, Systems, and Computers (JCSC) ISSN: 0218-1266. https://doi.org/10.1142/S0218126623501992. PP. 2350199
18. Raj Vikram Singh, Subodh Wariya Rajiv Kumar Singh, "Different Watermarking Technique used in Medical Image Security", Advanced Engineering Science, vol. 55 no. 1, pp. 492-501, 2023. ISSN/2791-8580

2022

19. Jyoti Garg, Subodh Wairya, "Performance Evaluation of Low Power Hybrid Combinational Circuits using Memristor", International Journal of Electrical and Electronics Research (IJEER), 2022, 10(4), pp. 988–993 **I**SSN: 2347-470X (Online) FOREX Publication 10.37391/IJEER.
20. Vivek Mishra, Anurag Yadav, Subodh Wairya, "Design of Compensated Supply Circuit Topology for a Ring Oscillator", International Journal of Computing and Digital System, July-2022. Int. J. Com. Dig. Sys. 12, No.1 (Jul-2022) pp. 1005-1017. https://dx.doi.org/10.12785/ijcds/120181. ISSN (2210-142X).
21. D Pandey, S Wairya, B Pradhan, Wangma, "Understanding COVID-19 response by twitter users: A text analysis approach", pp. 1-6, Heliyon (8), 2022, **Online ISSN: 2405-844**
22. Divya Tripathi, Subodh Wairya, A Cost Efficient QCA Code Converters for Nano Communication Applications, International Journal of Computing and Digital System, July-2022. Int. J. Com. Dig. Sys. 12, No.1 (Jul-2022), pp. 345-352. https://dx.doi.org/10.12785/ijcds/120128. ISSN (2210-142X).
23. Anum Khan, Subodh Wairya, "Performance Evaluation of Highly Efficient XOR and XOR-XNOR Topologies using CNTFET for Nanocomputation", International Journal of Computing and Digital System, July-2022. Int. J. Com. Dig. Sys. 12, No.1 (Jul-2022) pp. 225-236. https://dx.doi.org/10.12785/ijcds/120120. ISSN (2210-142X).
24. Pandey, D., Wairya, S., Sharma, M. et al "An approach for object tracking, categorization, and autopilot guidance for passive homing missiles", Aerospace Systems (2022): pp. 1-14. Springer Nature Singapore, https://doi.org /10.1007/s42401-022-00150-0. **Online ISBN: 978-3-540-39632-1**
25. Shilpi Gupta, Subodh Wairya, Shaliendra Singh, "S. Design and Analysis of Triple Metal Vertical TFET Gate Stacked with N-Type SiGe Delta-Doped Layer", Volume-14 Issue-8, June 2022, pp. 4217-4225 Silicon 2022. https://doi.org/10.1007/s12633-021-01211-3, ISSN 1876-9918 - Silicon (Online)
26. Anurag Yadav, Subodh Wairya, "Performance and Area Optimization of SRAM Cell in Nanotechnology Application", International Journal of Computing and Digital Systems (Int. J. Com. Dig. Sys. 11, No.1 (Mar-2022)) pp. 1009-1026, March 2022, https://dx.doi.org/10.12785/ijcds/110182, ISSN (2210-142X).
27. Pandey Digvijay and Subodh Wairya. "A Novel Algorithm to Detect and Transmit Human-Directed Signboard Image Text to Vehicle Using 5G-Enabled Wireless Networks." IJDAI vol.14, no.1 2022: pp.1-11. http://doi. org/10.4018/IJDAI.291084, International Journal of Distributed Artificial Intelligence, Online ISSN: 2637-7896

2021

28. Akhil Gupta, Rohit Anand, Digvijay Pandey , Nidhi Sindhwani, Subodh Wairya, Binay Kumar Pandey , Manvinder Sharma: "Prediction of Breast Cancer Using Extremely Randomized Clustering Forests (ERCF) Technique: Prediction of Breast Cancer." IJDST vol.12, no.4 2021: pp.1-15. http://doi.org/10.4018/IJDST.287859, (**ISSN**: 2456-8503
29. Pandey, B. K., Pandey, D., Wairya, S., & Agarwal, G. (2021). Deep Learning and Particle Swarm Optimisation-Based Techniques for Visually Impaired Humans' Text Recognition and Identification. Augment Hum Res 6, 14 (2021). https://doi.org/10.1007/s41133-021-00051-5.
ISSN: 2365-4325
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