Dheerendra Singh Gangwar

Assistant Professor. Faculty of Technology
VMSB Uttarakhand Technical University
Dehradun, Uttarakhand, PIN: 248007.

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Qualification

- ✓ **B. E. (MMMEC Gorakhpur, 2003)**
- ✓ **M. Tech. (JUIT Solan, 2010)**
- ✓ **Ph. D. (UTU Dehradun, 2021)**

Certificates

- ➢ **Outcome-Based Education in the 21st Century (Alison)**
- ➢ **Fundamentals of Digital Marketing (Google)**
- ➢ **Understanding Research Methods (Coursera)**
- ➢ **Introduction to the Internet of Things (NPTEL)**
- ➢ **Wireless Ad-hoc and Sensor Networks (NPTEL)**
- ➢ **PG Diploma In VLSI Design (CDAC NOIDA)**

Professional Skills

- ❑ **Embedded Sensing Systems**
- ❑ **Internet of Things**
- ❑ **Data Communication Networks**
- ❑ **VLSI Design**
- ❑ **Smart Ecological Farming**
- ❑ **Environmental Sustainability**

Soft Skills

- ○ **Team Spirit**
- ○ **Leadership**
- ○ **Conscientiousness**
- ○ **Good Cognitive Ability**
- ○ **Innovative and Critical Thinking**

Career Objective: To ignite the brains of budding engineers which may bring qualitative changes in their technological and interpersonal skills while working for an organization where creativity and sincerity is rewarded in right proportion.

Professional Career: 20 Years 3 Months **(Annexure-A)**

1. VMSB Uttarakhand Technical University, Dehradun, Uttarakhand,.
Assistant Professor (From 01-Sep-2012 until the present.)
2. Invertis University, Bareilly, Uttar Pradesh.
Assistant Professor (From 23-Jul-2011 to 26-Jul-2012.)
3. G. L. A. University, Mathura Uttar Pradesh.
Lecturer/Assistant Professor (From 15-Oct-2005 to 21-Jul-2011.)
4. Trident Techlabs Pvt. Ltd, New Delhi .
Application Engineer (From 31-Aug-2004 to 26-Aug-2005.)

Research Profile and Publications (29): **(Annexure -B)**

WoS/Scopus indexed Journal Articles	(02+07)
International Conference Articles	(09)
Peer Reviewed International Journal Articles	(06)
National Conference Articles	(05)
Book Chapter:	(01)
Google Scholar Publications/ Citations:	21/142
SCOPUS Publications/ Citations:	11/74
Web of Science Publications/ Citations:	07/48
Web of Science H-Index:	04
ORCID ID:	https://orcid.org/0000-0003-2245-3142

Supervised Projects: 43 **(Annexure -C)**
B. Tech. Projects: (09) M. Tech. Dissertations: (34)

Subjects Taught: B. Tech. (8 Years M. Tech. (12 Years)

Basic Electronics	Sensors and Actuators
Digital Electronics	Internet of Things and Its Applications
Electronic Switching	Mixed Signal IC Design
Multimedia Communication	CMOS Analog Circuit Design
Biomedical Signal Processing	Advance Digital Signal Processing
Data Communication Networks	Nano-materials and Nanotechnology

Personal Profile:

Father's Name:	Shri Ravendra Singh Gangwar
Mother's Name:	Smt. Awadhesh Kumari Gangwar
Date of Birth:	01-04-1982
Marital Status:	Married
Technical Skills:	IoT Boards, Matlab, Xilinx, OMNET++
Professional Memberships:	Senior Member of IEEE.

I hereby declare that the information given above is true to the best of my knowledge.

Place: Dehradun ***(Dr. Dheerendra Singh Gangwar)***

Annexure -A: **Professional Accomplishments**

1. **Establishment** of Grid Connected 100 kW Solar Power Plant in UTU Campus with the help of UREDA (Jul-2024).
2. **Faculty Advisor,** Community Service Club at VMSBUTU Dehradun (Oct-2023- until the present).
3. **Proctor,** VMSBUTU Dehradun (Apr-2023- until the present).
4. **Coordinator**, **Rural Entrepreneurship Cell** of VMSBUTU Dehradun (Nov-2022- until the present)
5. **Coordinator**, University Committee on **Skill Development and SDG** (Jul-2022- until the present)
6. **Coordinator**, **Unnat Bharat Abhiyan** for VMSBUTU Dehradun (Jul-2021- until the present)
7. Appointed as **External Academic Expert** in BoS for ECE Courses at DBU University, Dehardun (July-2022).
8. **Founder Chair, UTU IEEE-SIGHT** Group, (Feb-2020- until the present).
9. Provided tech support for **Ministry of Electronics and Information Technology Project** (Mar-2020-Oct-2021).
10. **Examination Coordinator/CS, Campus** Academic Programs of **VMSBUTU Dehradun** (Mar-2017 to Jan-2023).
11. **Coordinator, University Village Adoption Program**, VMSBUTU Dehradun (Jan-2017- until the present).
12. Organized Technical Festival **'Abhiyantrotsav-2016'** at UTU Dehradun, (Apr-2016).
13. **Founder Counselor,** IEEE Student Branch of UTU Dehradun, (Since Nov-2015).
14. **Faculty in Charge AICTE Scholarship** of Uttarakhand Technical University Dehradun, (Nov-2012- Jul-2017)
15. **Volunteer, Campus Placement Week** at UTU Dehradun in association with **CII**, Uttarakhand (Feb-2015).
16. **Coordinated a two-day workshop** on Labview and its applications (13-14 Jun 2011).
17. **Founder Counselor** of IEEE GLA University Student Branch (Oct-2010 to Jul-2011).
18. **Coordination** of various Technical, Cultural, and Spiritual events for students (May 2010 to Jul-2011).
19. **Faculty-in-Charge** of Socio-Technical Student Club in GLA University (May-2010 to Jul-2011).
20. **Conduction of** a 3-day Workshop on Advance Digital Signal Processing (23-25 Oct 2010).
21. **Faculty-in-Charge** of Project Evaluation Committee (Academic Session 2007-2008).
22. Presented a Research Paper in **AMS-2008 held in Kuala Lumpur, Malaysia** (May 2008).
23. **Conduction** of four-week **Skill Development Program** for pre-final and final year students. (Jun-2006).
24. Actively contributed to the sponsored projects, as a **team leader** on *industrial projects* completed for Applied Electromagnetics, NOIDA. (Oct-2005 to Jun-2006).
25. **Supervised interns from Thapar Institute of Engineering and Technology, Patiala** (Jan to June, 2005)
26. **Conduction of 1-week Workshops** on *Front End VLSI Design at **MNNIT Allahabad**.* (1-5 Nov, 2005)
27. **Conduction** of short-term training programs on ***VLSI Design*** *in many Institutions.* (Aug-2004 to Aug-2005)
28. Assisted ***R&D and Design Teams*** on various projects within and outside the organization. (Aug-2004 to Aug-2005)

Awards and Recognitions:

1. **UTU Star for Sustainable Development Award** by VMSBUTU Dehradun (Oct-2023).
2. **Best Researcher Award** by VD GOOD Organization, Villupuram, Chennai, Tamil Nadu (Jul-2021).
3. **Teaching Assistanceship** during M. Tech. Program at JUIT Solan (Aug-2008 to May-2010).

Peer Reviewed Web of Science/Scopus Indexed International Journal (09):

1. D. S. Gangwar and N. Kumar" Implementation and Performance Analysis of Congestion Aware Adaptive Routing Protocol for on-Chip Networks" Communicated to **ECTI Transactions on Electrical Engineering, Electronics, and Communications,** Ref. No. ECTI_254695, (ISSN: 1685-9545).
2. **D. S. Gangwar** and S. Gangwar, **"**Understanding the Dynamics of Social Capital in Assessment of Social and Economic Resilience to the COVID-19 Pandemic" Communicated **to Journal of Social Indicators Research, Springer Nature**, Ref. No. SOCI-D-23-01861R1, (ISSN: 1573-0921).
3. **D. S. Gangwar** and A. Kashyap, "West First Turn Routing Algorithm with Backtracking Mechanism for on Chip Networks" Accepted in **ECTI Transactions on Electrical Engineering, Electronics, and Communications,** Vol. 23, No. 1 (February-2025) Ref. No. ECTI_252651. (ISSN: 1685-9545).
4. **D. S. Gangwar,** "Recent advancements in environmental biosensors for agricultural applications with implications for climate change," **Environment, Development and Sustainability, Vol. 26, No. 8, Springer-Nature,** (August-2024) DOI: 10.1007/s10668-024-05300-2. (ISSN: 1573-2975).
5. **D. S. Gangwar,** S. Tyagi and S. K. Soni, "A Techno-Economic Analysis of Digital Agriculture Services: An Ecological Approach towards Green Growth." **International Journal of Environmental Science and Technology**, Vol. 19, No. 5, pp. 3859–3870 (May-2022). https://doi.org/10.1007/s13762-021-03300-7, (ISSN: 1735-1472).
6. **D. S. Gangwar,** S. Tyagi and S. K. Soni, "The Impact of Deployment Pattern and Routing Scheme on the Lifetime in Multi-Sink Wireless Sensor Network." **Wireless Personal Communications,** Vol. 117, No. 2, pp. 971-985, March-2021. https://doi.org/10.1007/s11277-020-07906-x (ISSN 0929-6212).
7. **D. S. Gangwar**, "Cultivation of Ecological Consciousness for a Sustainable Agroecosystem". **Journal of International Buddhist Studies,** Vol. 11, No. 2, Dec. 2020, pp. 30-46. https://so09.tci-thaijo.org/index.php/jibs/article/view/2553. (ISSN: 1906-6244).
8. **D. S. Gangwar,** S. Tyagi and S. K. Soni, "A Conceptual Framework of Agroecological Resource Management System for Climate Smart Agriculture." **International Journal of Environmental Science and Technology**, Vol. 16, No. 08, pp. 4123-4132, August-2019. https://doi.org/10.1007/s13762-018-1827-3, (ISSN: 1735-1472).
9. **D. S. Gangwar** and D. S. Saini, "Arrogyam: Arrhythmia Detection for Ambulatory Patient Monitoring." In: Ranka, S., *et al.* Contemporary Computing. IC3 2010. Communications in Computer and Information Science, vol 95. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-14825-5_15**.** (ISSN: 1865-0929).

Web of Science/Scopus Indexed International Conferences (05):

1. **D. S. Gangwar,** S. Tyagi and S. K. Soni, "Connecting Farmers to Knowledge, Networks and Institutions for Agroecological Sustainability," In Proceedings of ICE3 2020 International Conference on Electrical and Electronics Engineering, 14-15, February-2020, Gorakhpur, India, DOI: 10.1109/ICE348803.2020.9122983. (Scopus)
2. **D. S. Gangwar** and S. Tyagi, "Challenges and Opportunities for Sensor and Actuator Networks in Indian Agriculture," *2016 8th International Conference on Computational Intelligence and Communication Networks (CICN)*, Tehri, India, 2016, pp. 38-42, DOI: 10.1109/CICN.2016.16. (WoS, Scopus)
3. J. Sudan, **D. S. Gangwar,** B. Kumar and Poornima Mittal," Performance analysis of cylindrical dual material gate junctionless nanowire transistor" In Proceedings of The International Conference on Communication and Computing Systems (ICCCS-2016), Gurgaon, India, Nov-2016, pp. 947-951. (Scopus)
4. **D. S. Gangwar,** "Biomedical sensor network for cardiovascular fitness and activity monitoring," *2013 IEEE Point-of-Care Healthcare Technologies (PHT)*, **Bangalore, India, 2013,** pp. 279-282, DOI: 10.1109/PHT.2013.6461339. (WoS, Scopus)
5. **D. S. Gangwar,** T. Tiwari and B. Singh, "Electronic Implementation of Biologically Inspired Neuromorphic Vision Sensor," *2008 Second Asia International Conference on Modelling & Simulation (AMS)*, **Kuala Lumpur, Malaysia, 2008**, pp. 410-414, doi: 10.1109/AMS.2008.127. (Scopus)

Peer Reviewed International Journals (06):

1. **D. S. Gangwar,** S. Tyagi and S. K. Soni**,** "Network Lifetime Maximization in Wireless Sensor Network with Multiple Sink Nodes," **Discovery Journal,** Vol. 54, No. 271, Jul-2018, pp. 284-290. (ISSN: 2278-5469).
2. **D. S. Gangwar** and S. Tyagi**,** "Internet of Things Connected Smart Farm Solutions for Sustainable Agro-ecological and Rural Development," **International Journal of Engineering and Future Technology** (IJEFT), Vol. 14, No. 2, Jan-2017, pp. 64-71. (ISSN: 2455-6432)

3. P. Nagwal, A. Kumar and **D. S. Gangwar,** "Comparative Analysis of Spatio and Viterbi Encoding and Decoding Techniques in Hardware Description Language," **Global Journal of Computer Science and Technology, Vol. 13, No. 1, Aug-2013**, USA, pp. 1-9. (ISSN: 0975-4350)
4. Ajay, A. Kumar and **D. S. Gangwar**, "Design and Simulation of DDR3-SDRAM Controller for High Performance in VHDL," **International Journal of VLSI and Embedded Systems, Vol. 4, Art.- 06124, Jul-2013**, pp. 248-256. (ISSN: 2249-6556)
5. **D. S. Gangwar**, "Acquisition and Communication Requirements for Cardiovascular Signals," **Public Health Frontier,** World Academic Publishing, **Hong Kong, China, Vol. 2, No. 1, Mar-2013**, pp. 27-37. (ISSN: 2227-4561). DOI: **10.5963/PHF0201004.**
6. **D. S. Gangwar**, "Traffic and Performance Management for Biomedical Sensor Network," **International Journal of Computer Science and Communication, Vol. 2, No.1, Jan-2011**, pp. 183-189. (ISSN: 0973-7391)

International/ National Conferences (08):

1. **D. S. Gangwar** and S. Tyagi**, "IoT Sulutions for Smart Farm Management."** In proceedings of 2nd IEEE International Symposium on Internet of Things: Smart Innovation and Usages (IoT-SIU 2017), 28-Feb and 01-Mar, 2017, **Bareilly, India**
2. **D. S. Gangwar** and D. S. Saini, "Content Adaptation for M-learning Environment to enhance interactivity in Teaching Learning Process" **T4E-2009**, International Workshop on Technology for Education, **4-6 Aug 2009**, **Bangalore**, India, 2009, pp. 123-126.
3. **D. S. Gangwar** and Tarun Tiwari "Neuromorphic Retina That Mimics Sense of Vision on Semiconductor" **WPMC 2007,** 10th International Symposium on Wireless Personal Multimedia Communications, **3-6-Dec-2007**, **Jaipur, India,** 2007, pp. 305-309.
4. **D. S. Gangwar,** "Acquisition, Retrieval and Communication of Cardiovascular Monitoring Signals" ITEM-2010, 6th National conference on Information Technology and Energy Management, 20-21 Feb-2010, Mathura, India, 2010, pp. 342-348.
5. **D. S. Gangwar,** "Clinical Decision Support Systems" SHOFT-COMP-2009, 5th National Conference on Advancement of Technologies – Soft Computing, 24-25 Jan 2009, Mathura, India, 2009, pp. 204-208.
6. **D. S. Gangwar** and V. K. Deolia, "Intelligent Multimedia Tutoring Systems" NETCOMM-2008, 4th National conference on Advancement of Technologies – Trends in Networking & Communication, 23-24 FEB- 2008), Mathura India,2008, pp. 104-109.
7. **D. S. Gangwar,** "Vision Chips: Mixing Biology and Electronics to Create Machine Vision" GLOB-2007, 3rd National conference on Advancement of Technologies-Global Scenario, 25-26 Feb-2007, Mathura India,2007, pp 108-112.
8. **D. S. Gangwar,** V. K. Deolia, J. P, Saini and D. S. Chauhan "Clinical Aspects of Artificial Neural Networks" EMTECH-MAN-2006, 2nd National conference on Emerging trends in technology and Management, 18-19 FEB, 2006, Mathura India, 2006, pp 309-314.

Book Chapter (1):

1. **D. S. Gangwar** and S Tyagi, "Biosensors in Climate-Smart Organic Agriculture." In: Al-Khayri, J.M., Alnaddaf, L.M., Jain, S.M., Penna, S. (eds) Innovative Methods in Horticultural Crop Improvement. Advances in Plant Breeding Strategies, vol 2. Springer, Cham. https://doi.org/10.1007/978-3-031-61095-0_11

Reviewer, Journals (11):

1. IEEE Sensors Journal, (ISSN 1558-1748).
2. International Journal of Social Economics (ISSN: 0306-8293).
3. Springer Journal, Environment, Development and Sustainability, (ISSN: 1387-5851).
4. Springer Journal, Telecommunication Systems (ISSN: 1018-4864).
5. Springer Journal, Wireless Personal Communications (ISSN: 0929-6212)
6. International Journal of Environmental Science and Technology (ISSN: 1735-1472).
7. Springer Journal of the Knowledge Economy (ISSN: 1868-7873).
8. Springer Journal of Social Indicators Research (ISSN: 0303-8300).
9. Science Direct Journal of Smart Agriculture Technologies (ISSN: 2772-3755).
10. Taylor & Francis Journal, Cogent Food & Agriculture (ISSN: 2331-1932).
11. Science Direct Heliyon Journal (ISSN: 2405-8440).

Research and Consultancy Projects (06):

Project-1: "High-Speed ADC Interface with Virtex-II FPGA Board."

TEAM SIZE: 5 Members. **Role: Team Member**

Contribution: Verification of different modules through test benches. Completed at Trident Techlabs Pvt. Ltd, New Delhi 110015 during **Nov-2004 to Apr 2005**. Coding of this project at RTL level in VHDL and the code was verified using EDA tools: Active-HDL V 6.2, Synplfy-Pro V 7.0, and Matlab V6.5. On the board level, Interfacing of the ADC board with two digital O/P channels of the FPGA containing an FFT-based algorithm was completed to process the Data.

Project-2: "FPGA board design for RADAR Code Shaper Circuit"

TEAM SIZE: 10 Members **Role: Principal Co-Investigator**

Contribution: Played the role of Team Leader for a team of 3 Lecturers and 7 students for an Industry sponsored project. This module was developed to replace the preexisting board comprising some 100 odd ICs on the Radar code-shaper board. This circuit was implemented on Actel PA-150 pq208 Device, mounted on a similar cord to replace the older design on the Radar receiver used by the Indian Armed Force. Project was completed at GLAITM Mathura for Applied Electromagnetic Ltd, NOIDA, during **Nov-2005 to May-2006.**

Project-3: "Installation of Solar Street Lights at Shishamwara Village.**"**

TEAM SIZE: 05 Members **Role: Principal Investigator**

Contribution: In collaboration with the Uttarakhand Renewable Energy Development Agency (UREDA) the Uttarakhand Technical University helped in the installation and maintenance process of 10 solar streets lights in the Shishamwara village under Solar Street Light Scheme (Sanctioned by MNRE, Government of India). These lights were installed in Feb-2019 at the sensitive places suggested by the Villagers and Village Pradhan.

Project-4: "A Techno-Economic Analysis of Digital Agriculture Services."

TEAM SIZE: 15 Members **Role: Principal Investigator**

Contribution: This study investigated the impact of technological interventions on agricultural practices. Parameters such as soil moisture, soil fertility and crop health were observed as a key indicator for overall performance of crop yield. This work highlights the role of modern sensor facilities in ecological farming and how they are empowering farmers in managing their yields with reduced economic and environmental cost. This study was carried out with the help of Advancetech India Private Limited, Chandigarh, Dhamma Impressions Private Limited, Kaimganj, Farrukhabad and other NGOs working with practicing Farmers in Farrukhabad and Dehradun during **Jan-2017 to Jun-2020.**

Project-5: "Participatory Capacity Building among Rural Women to Establish Community Enterprises."

TEAM SIZE: 15 Members **Grant No: RP-03525G (**UBA, MoE, Govt. of India**)** **Role: Principal Investigator**

Contribution: This study investigates impact of Digital, Financial and Academic inclusion of Rural Women to form community enterprises. These community enterprises are helping them in improving their monthly income and their connectivity with knowledge, networks and institutions. This project is a part of Unnat Bharat Abhiyan (UBA). As being a participating Institute, UBA funded the UBA Cell of the University for this Project. This project was conducted during **Apr-2022 and Mar-2023** with a training of 35 women from the nearby villages to help them in establishing their own community enterprises.

Project-6: "Development of IoT and Drone based Agriculture Monitoring System with Objective of Skill Development of Socially Deprived Community."

TEAM SIZE: 15 Members **Grant No:** 26(6)/2019-ESDA (MeiTy, Govt. of India) **Role:** Tech Support

Contributions: This project demonstrated applications of drone and sensors technologies and their modifications with time in the agriculture sector. The application of drones in the area of crop monitoring, and pesticide spraying for Precision Agriculture were tested successfully. This project was related to development of prototypes for agricultural drone, on-board deployment of multiple sensors, and innovation in spot area spraying. This study was conducted during **Mar-2020 and Dec-2022** at different locations in Uttar Pradesh.

Annexure -C: M. Tech. Dissertation Supervision (34)

1. Pooja Nagwal, Comparative analysis of spatio-temporal and viterbi encoding schemes, 2012-13.
2. Ajay, Design and implementation of high performance DDR3 SDRAM controller, 2012-13.
3. Dushyant Kumar, Design of Adiabatic CMOS ring oscillator, 2012-13.
4. Arvind Kumar, Comparative analysis of DCT and DWT image compression Techniques, 2012-13.
5. Divya Chauhan, FPGA Implementation of TACIT Cryptographic Algorithm, 2012-13.
6. Pradeep Pawar, Quantitative investigation of ECG waveform, 2013-14
7. Deepa Saini, Modeling and Simulation of ring oscillator using dual gate organic thin film transistor, 2013-14.
8. Deepak Singh, FPGA Implementation of Crossbar Structured Controller Area Network using VHDL, 2013-14.
9. Chandrakant Kapil, VHDL Implementation of Touchtone Call Processing System, 2013-14.
10. Sandhya Palyal, FPGA Implementation of IEEE 802.2 Ethernet MAC Layer using VHDL, 2013-14.
11. Shilpa Saini, Operational Trans-conductance Amplifier using, dual gate organic thin film transistor, 2014-15.
12. Nititn Caudhary, FPGA Implementation Wave Pipelined Network Router, 2014-15.
13. Monika Bisht, Implementation of Direct Digital Frequency Synthesizer using Bhaskar and Taylor Series Approximation, 2014-15.
14. Harshita Prasad, Power Efficient S-Box Encryption with Secrecy Enhancement, 2014-15.
15. Pallavi Rana, Design of Pseudo-Random Sequence Generator for DSSS Techniques, 2014-15.
16. Neeraj Devrari, Design of High-Speed MAC using Vedic Multipliers, 2014-15.
17. Praveen, FPGA Implementation of Network Intrusion Detection System, 2014-15.
18. Rashmi Bisht, Biological Function Simulating Unit for Artificial Intelligent Circuits, 2014-15.
19. Laksmi Gupta, Design of Neural Network Based Stream Cipher Cryptographic using VHDL, 2014-15.
20. Sudhir Dobhal, PFGA Implementation of Low-Density Parity Check Encoder and Decoder, 2014-15.
21. Jaspreet Sudan, Performance analysis of dual gate junction-less nano-wire transistor and applications, 2015-16.
22. Priya Bhardwaj, Short Range Communication system for vehicular communication, 2015-16.
23. Shivika, Implementation of Adaptive transversal Filter for Acoustic Echo Cancellation, 2015-16.
24. Anshu Dhariwal, Congestion Aware Routing Protocol for Network-on-Chip, 2015-16.
25. Neha Guleria, Ripple Carry Adder using Quantum Dot Cellular Automata, 2016-17.
26. Isha Padiyar, Design and Performance Analysis of Tri-Gate SoI FinFET, 2016-17.
27. Rishabh Jain, Double Precision Floating Point Multiplier design using Verilog, 2016-17.
28. Shivam Sharma, Design and Implementation of FPGA Based VGA Monitor and PS2 Keyboard Interface, 2016-17.
29. Ashlesha Thapa, Low Power Design of Jonson Counter using MTCOMS, Gate Diffusion input, 2017-18.
30. Manisha Kumari, VHDL implementation of Ventricular Arrhythmia Detection System, 2018-19.
31. Jyoti Sharma, An Efficient Design of Mod-4 and Mod-10 Counter using Quantum-dot Cellular Automata, 2018-19.
32. Rakesh Kumar, Design and Simulation of Nano-scale Memristor as an Artificial Synapse to Improve Learning in Neural Spiking Circuits, 2021-22.
33. Aryan Kashyap, FPGA based Design of Low Power Reconfigurable Router for Network on Chip, 2022-23.
34. Nitesh Kumar, Fault Tolerant and Congestion Aware Routing Protocol for on-Chip Networks, 2023-24.