Gaurav Trivedi

a. **Name** : Dr. Gaurav Trivedi

b. **Gender** : Male

c. **Date of Birth** : 19 January 1976

d. **Designation & Affiliation** : Professor, Dept. of Electronics and Electrical Engineering, Indian Institute of Technology Guwahati, Guwahati, Assam, Pin 781039

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h. **Qualifications***(starting from University Level)*

Sl. No	Degree	Institution	Field	Year
1	B. E.	SGSITS, Indore	Electronics	1998
2	M. Tech.	IIT Bombay	Microelectronics	2000
3	Ph.D.	IIT Bombay	Electrical Engineering (VLSI CAD)	2006

i. **Employment Experience**

Sl. No.	Position and Organization	Nature of Job	Period
1	Professor, Department of EEE, IIT Guwahati	Teaching, Research and Development	December 2024 – Till Date
2	Associate Professor, Department of EEE, IIT Guwahati.	Teaching, Research and Development	June 2018 – December 2024
3	Assistant Professor, Department of EEE, IIT Guwahati.	Teaching, Research and Development	November 2011 – June 2018
4	Post-Doctoral Fellow, EE Dept, IIT Bombay	Research and Development	September 2009 – November 2011
5	Senior Member of Technical Staff, Siemens India (earlier Berkeley Design Automation India Pvt Ltd)	Research and Development	April 2008 – July 2009
6	Senior Member of Technical Staff, Cadence Design Systems India Pvt	Research and Development	February 2007 – March 2008
	Senior Research Fellow, EE Dept., IIT Bombay	Research and Development	August 2006 – February 2007

j. **List of Publications**

Book

[1] Arti Noor, Abhijit Sen, **Gaurav Trivedi**, Emerging Trends and Technologies on Intelligent Systems, 2022, Volume 1371, Advances in Intelligent Systems and Computing Series, ISBN : 978-981-16-3096-5

[2] [8] Arti Noor, Kriti Saroha, Emil Pricop, Abhijit Sen, **Gaurav Trivedi**, Emerging Trends and Technologies on Intelligent Systems, 2024, Volume, Advances in Intelligent Systems and Computing Series, LNNS, volume 730

[3] [9] Arti Noor, Kriti Saroha, Emil Pricop, Abhijit Sen, **Gaurav Trivedi**, Emerging Trends and Technologies on Intelligent Systems, 2024, Volume, Advances in Intelligent Systems and Computing Series, LNNS, volume 1073, (Available in December 2024)

[4] **Gaurav Trivedi**, An Introduction to Circuit Simulation, (STUDY (Innovation of bachelor STUDY programs at the Faculty of Electrical Engineering and Informatics of the University of Pardubice by improving language skills of the FEEI employees on the basis of implementing study supports in English into the teaching; No. CZ 1.07/2.2.00/28.0125)

Book Chapters:

[1] P. Tiwari, P. Mahanta, G. Trivedi, DNN Based Short Term Load Forecasting of Individual Household with Real and Synthetic Data-Set, In: Gupta, D., Sambyo, K., Prasad, M., Agarwal, S. (eds) Advanced Machine Intelligence and Signal Processing, Lecture Notes in Electrical Engineering, vol 858, Springer, pp. 789-800, June 2022, https://doi.org/10.1007/978-981-19-0840-8_61

[2] Praveen Tiwari, Maj. Sunil Kumar Panwar, Bikram Paul, Pinakeswar Mahanta, **Gaurav Trivedi**, GUI-Based Secure Architecture Design for Distributed Community Micro-grid, In: Mallick P.K., Meher P., Majumder A., Das S.K. (eds) Electronic Systems and Intelligent Computing. Lecture Notes in Electrical Engineering, vol 686, Springer, pp. 685-696, 2021, https://doi.org/10.1007/978-981-15-7031-5_65

[3] Sushanta Bordoloi, Ashok Kumar Ray, **Gaurav Trivedi**, Simulation framework for GaN devices with special mention to reliability concerns, in VLSI and Post-

CMOS Devices, Volume 2: Devices, circuits and interconnects, IET and edited by Rohit Dhiman and Rajeevan Chandel, February 2020, https://doi.org/10.1049/PBCS073G_ch4

[4] Sukanta Dey, Sukumar Nandi, **Gaurav Trivedi**, PGRDP: Reliability, Delay, and Power-Aware Area Minimization of Large-Scale VLSI Power Grid Network using Cooperative Coevolution, in the Book: Intelligent Computing Paradigam - Recent Trends", Springer, 2019, https://doi.org/10.1007/978-981-13-7334-3_6

[5] Satyabrata Dash, Deepak Joshi, Sukanta Dey, Meenali Janveja and **Gaurav Trivedi**, StormOptimus: A single objective constrained optimizer based on brain-storming process for VLSI circuits, Brain Storm Optimization Algorithms: Concepts, Principles, and Applications, Springer Book Series - Adaptation, Learning, and Optimization Editors: Shi Cheng and Yuhui Shi, vol 23. Springer, June 2019, Cham. https://doi.org/10.1007/978-3-030-15070-9_9

[6] Berihu Geberyohannes Abreha, Pinakeswar Mahanta, and **Gaurav Trivedi**, Numerical modeling and simulation of thermal energy storage for solar cooking using Comsol multiphysics software, Published by AIP Publishing in Current Trends in Renewable and Alternate Energy, AIP Conference Proceedings 2091, 02 April, 2019, Editors: Plaban Bora, Biswa Ranjan Phukan and Dhiraj Bora

Journals:

[1] S. M. Mishra, H. S. Shekhawat, J. Pidanic and G. Trivedi, "FPGA-Based Adaptive LIF Neuron for High-Speed, Energy-Efficient Spiking Neural Network," in *IEEE Transactions on Circuits and Systems for Artificial Intelligence*, doi: 10.1109/TCASAI.2025.3568365.

[2] B. Boro, R. Parmar and G. Trivedi, "Vector-Matrix Multiplier Architecture for In-Memory Computing Applications with RRAM Arrays," in *IEEE Transactions on Nanotechnology*, vol. 24, pp. 249-259, 2025, doi: 10.1109/TNANO.2025.3560912.

[3] A. D. Roshan, P. Guha and G. Trivedi, "Hardware-Optimized Regression Tree-Based Sigmoid and Tanh Functions for Machine Learning Applications," in IEEE Transactions on Circuits and Systems II: Express Briefs, doi: 10.1109/TCSII.2024.3485493

[4] M. Janveja, R. Parmar, S. Dash, J. Pidanic and G. Trivedi, “A Low-Power Co-Processor to Predict Ventricular Arrhythmia for Wearable Healthcare Devices,” in IEEE Transactions on Very Large Scale Integration (VLSI) Systems, vol. 32, no. 9, pp. 1672-1683, Sept. 2024, doi: 10.1109/TVLSI.2024.3413584

[5] R. Parmar, K. Yadav, G. Anand and G. Trivedi, “An SNN-Inspired Area- and Power-Efficient VLSI Architecture of Myocardial Infarction Classifier for Wearable Devices,” in IEEE Transactions on Circuits and Systems II: Express Briefs, vol. 71, no. 6, pp. 3191-3195, June 2024, doi: 10.1109/TCSII.2024.3355016

[6] Chakraborty, B., Borgohain, M.M., Saikia, E. et al. First-Principles Study of the Electronic and Optical Properties of Sn-BeO Heterostructure. J. Electron. Mater. 53, 3746–3755 (2024). https://doi.org/10.1007/s11664-024-11031-x

[7] A. Dongre, B. Boro and G. Trivedi, “ADC-Less Reprogrammable RRAM Array Architecture for In-Memory Computing,” in IEEE Transactions on Very Large Scale Integration (VLSI) Systems, vol. 31, no. 12, pp. 2053-2060, Dec. 2023

[8] M. Janveja, A. K. Sharma, A. Bhardwaj, J. Pidanic and G. Trivedi, “An Optimized Low-Power VLSI Architecture for ECG/VCG Data Compression for IoHT Wearable Device Application,” in IEEE Transactions on Very Large Scale Integration (VLSI) Systems, vol. 31, no. 12, pp. 2008-2015, Dec. 2023, doi: 10.1109/TVLSI.2023.3314611

[9] S. S. P. Goswami and G. Trivedi, “FPGA Implementation of Modified SNOW 3G Stream Ciphers Using Fast and Resource Efficient Substitution Box,” in IEEE Embedded Systems Letters, vol. 15, no. 4, pp. 238-241, Dec. 2023, doi: 10.1109/LES.2023.3298743

[10] A. Dongre and **Gaurav Trivedi**, “Variation Tolerant RRAM Based Synaptic Architecture for On-Chip Training,” in IEEE Transactions on Nanotechnology, vol. 22, pp. 436-444, 2023, doi: 10.1109/TNANO.2023.3298962.

[11] R. Parmar, M. Janveja, J. Pidanic and **Gaurav Trivedi**, Design of DNN-Based Low-Power VLSI Architecture to Classify Atrial Fibrillation for Wearable Devices, in IEEE Transactions on Very Large-Scale Integration (VLSI) Systems, doi: 10.1109/TVLSI.2023.3236530.

[12] M. Janveja, R. Parmar and **Gaurav Trivedi**, MInSC: A VLSI Architecture for

Myocardial Infarction Stages Classifier for Wearable Healthcare Applications, in IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, doi: 10.1109/TCSII.2022.3222738.

[13] A. Y. R., N. Raj and **Gaurav Trivedi**, A MOS-DTMOS Implementation of Floating Memristor Emulator for High-Frequency Applications, in IEEE Transactions on Very Large-Scale Integration (VLSI) Systems, doi: 10.1109/TVLSI.2022.3227201.

[14] A. Dongre and **Gaurav Trivedi**, RRAM Based Energy Efficient Scalable Integrate & Fire Neuron with Built-in Reset Circuit, in IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, doi: 10.1109/TCSII.2022.3219203.

[15] A. Y. R, G. S. Satyanarayan and **Gaurav Trivedi**, A High Frequency MOS-based Floating Charge-Controlled Memcapacitor Emulator, in IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, doi: 10.1109/TCSII.2022.3221334.

[16] B. Paul, T. K. Yadav, B. Singh, S. Krishnaswamy and **Gaurav Trivedi**, A Resource Efficient Software-Hardware Co-Design of Lattice-Based Homomorphic Encryption Scheme on the FPGA, in IEEE Transactions on Computers, 2022, doi: 10.1109/TC.2022.3198628.

[17] B. Paul, A. Nath, S. Krishnaswamy, J. Pidanic, Z. Nemec and **Gaurav Trivedi**, Tensor Based Multivariate Polynomial Modulo Multiplier for Cryptographic Applications, in IEEE Transactions on Computers, 2022, doi: 10.1109/TC.2022.3215638.

[18] B. Paul, S. Pal, A. Agrawal and **Gaurav Trivedi**, Triple Pendulum Based Nonlinear Chaos Generator and its Applications in Cryptography, in IEEE Access, vol. 10, pp. 127073-127093, December, 2022, doi: 10.1109/ACCESS.2022.3226515.

[19] Pritam Bhattacharjee, **Gaurav Trivedi** and Alak Majumder, On-chip supply noise in multiprocessors: impact and clock gating inspired mitigation strategies, International Journal of Electronics, December, 2022, DOI: 10.1080/00207217.2022.2158493

[20] A. Y. R., G. S. Satyanarayan and **Gaurav Trivedi**, A Flux Controlled MOS-Based Optimized High Frequency Meminductor Emulator, in IEEE Journal on Emerging and Selected Topics in Circuits and Systems, vol. 12, no. 4, pp. 774-784, Dec. 2022,

doi: 10.1109/JETCAS.2022.3221305.

[21] A. Y. R., G. S. Satyanarayan and **Gaurav Trivedi**, An Optimized MOS-Based High Frequency Charge-Controlled Memcapacitor Emulator, in IEEE Journal on Emerging and Selected Topics in Circuits and Systems, vol. 12, no. 4, pp. 793-803, Dec. 2022, doi: 10.1109/JETCAS.2022.3221314

[22] Tomáš Krejčí, Tomáš Zálabský, Dušan Kopecký, **Gaurav Trivedi**, Application of hash function for generation of modulation data in RadCom system, Digital Signal Processing, Volume 130, September, 2022, 103735, ISSN 1051-2004, https://doi.org/10.1016/j.dsp.2022.103735

[23] S. Bordoloi, A. Ray and **Gaurav Trivedi**, Access Region Stack Engineering for Mitigation of Degradation in AlGaN/GaN HEMTs with Field Plate, IEEE Transactions on Device and Materials Reliability, vol. 22, no. 1, pp. 73-84, March 2022, doi: 10.1109/TDMR.2022.3150714

[24] K.M. Dwivedi, G. Trivedi and S.K. Khijwania, Fiber Bragg grating employing novel apodization profile: performance optimization for quasi-distributed sensing applications, Optical and Quantum Electronics **54**, 338, May, 2022. https://doi.org/10.1007/s11082-022-03691-y

[25] M. Janveja, R. Parmar, M. Tantuway and **Gaurav Trivedi**, A DNN Based Low Power ECG Co-Processor Architecture to Classify Cardiac Arrhythmia for Wearable Devices, in IEEE Transactions on Circuits and Systems II: Express Briefs, vol. 69, no. 4, pp. 2281-2285, April 2022, doi: 10.1109/TCSII.2022.3146036

[26] Sumit Agarwal, Shaik Rafi Ahamed, Anup Kumar Gogoi and **Gaurav Trivedi**, 28 Gbps Radix-16, 512-point FFT Processor based Continuous Streaming OFDM for WiGig, Springer Circuits, Systems, and Signal Processing, 41, 2871–2897, November, 2021, https://doi.org/10.1007/s00034-021-01917-0

[27] S. Agarwal, S. R. Ahamed, A. K. Gogoi and **Gaurav Trivedi**, A Low-Complexity Shifting-Based Conflict-Free Memory-Addressing Architecture for Higher-Radix FFT, in IEEE Access, vol. 9, pp. 140349-140357, 2021, doi: 10.1109/ACCESS.2021.3119598

[28] Meenali Janveja, **Gaurav Trivedi**, An area and power efficient VLSI architecture for ECG feature extraction for wearable IoT healthcare applications, Integration,

Volume 82, 2022, Pages 96-103, https://doi.org/10.1016/j.vlsi.2021.09.006

[29] Swati Shukla, Abhishek Agrawal, Balbir Singh, **Gaurav Trivedi**, An FPGA based electromagnetic transient analysis of power distribution network, Electric Power Systems Research, Volume 202, 2022, 107577, ISSN 0378-7796, https://doi.org/10.1016/j.epsr.2021.107577

[30] S. Bordoloi, A. Ray and **Gaurav Trivedi**, Introspection into Reliability Aspects in AlGaN/GaN HEMTs With Gate Geometry Modification, in IEEE Access, vol. 9, pp. 99828-99841, 2021, doi: 10.1109/ACCESS.2021.3096988

[31] Sukanta Dey, Sukumar Nandi, and **Gaurav Trivedi**, PGOpt: Multi-objective Design Space Exploration Framework for Large-Scale On-Chip Power Grid Design in VLSI SoC using Evolutionary Computing Technique, Microprocessors and Microsystems, Volume 81, 103440, March 2021, https://doi.org/10.1016/j.micpro.2020.103440

[32] N. Y. Meitei, K. L. Baisnab, and **Gaurav Trivedi**, A new 3D-IC partitioning method based on Genetic Algorithm, IET Circuits, Devices & Systems, Volume 14, Issue 7, pp. 1104-1109, October 2020, https://doi.org/10.1049/iet-cds.2020.0128

[33] A. G. Berihu, Pinakeswar Mahanta, **Gaurav Trivedi**, Thermal performance evaluation of multi-tube cylindrical LHS system, Applied Thermal Engineering, Elsevier, Volume 179, 115743, October 2020, https://doi.org/10.1016/j.applthermaleng.2020.115743

[34] Sukanta Dey, Sukumar Nandi, **Gaurav Trivedi**, Machine Learning Approach for Fast Electromigration Aware Aging Prediction in Incremental Design of Large Scale On-Chip Power Grid Network, ACM Transactions on Design Automation of Electronic Systems (TODAES), Volume 25, Issue 5, Article No.: 42, pp. 1–29, October 2020, https://doi.org/10.1145/3399677

[35] A. G. Berihu, Pinakeswar Mahanta, **Gaurav Trivedi**, Performance Investigation of lab-scale shell and tube LHS prototype, Journal of Energy Storage, Volume 31, October 2020, 101527, https://doi.org/10.1016/j.est.2020.101527

[36] Krishna Mohan Dwivedi, **Gaurav Trivedi**, Sunil K Khijwania, and Tomasz Osuch, Design and Performance Analysis of a High Sensitive Ultrasonic Acoustic

sensor based on π-phase-shifted Fiber Bragg Grating and Fiber Mach-Zehnder Interferometer Interrogation, Metrology and Measurement Systems", Vol. 27, No. 2, pp. 289–300, June 2020, DOI: 10.24425/mms.2020.132775

[37] S. Hussain, R. Kumar, **Gaurav Trivedi**, Methodology and Comparative design of an efficient 4-bit Encoder with bubble error corrector for 1-GSPS Flash type ADC, IET Circuits, Devices & Systems, Volume 14, Issue, pp. 629-639, May 2020, doi: https://doi.org/10.1049/iet-cds.2019.0499

[38] Ashok Kumar Ray, Sushanta Bordoloi, Biplab Sarkar, Pratima Agarwal, **Gaurav Trivedi**, Numerical Simulation of Enhanced-Reliability Filleted-Gate AlGaN/GaN HEMT, Journal of Electronic Materials, 49, pp. 2018–2031, May 2020. https://doi.org/10.1007/s11664-019-07905-0

[39] Krishna Mohan Dwivedi, Tomasz Osuch, and **Gaurav Trivedi**, High Sensitive and Large Dynamic Range Quasi-Distributed Sensing System Based on Slow-Light p-phase-shifted Fiber Bragg Grating, in Elsevier Opto-Electronics Review, vol. 27, No 3, pp. 233-240, July 2019. ISSN 1896-3757

[40] Sunil Dutt, Satyabrata Dash, Sukumar Nandi and **Gaurav Trivedi**, Analysis, Modeling and Optimization of Equal Segment Based Approximate Adders, in IEEE Transactions on Computers, Volume 68, Issue, March 2019, pp. 314-330, doi: 10.1109/TC.2018.2871096

[41] Sameer Pawanekar, Kalpesh Kapoor, **Gaurav Trivedi**, Kapees3: A High-Quality VLSI Placement Tool Using Nesterov's Method for Density Penalty, Word Scientific Journal of Circuits, Systems and Computers, Vol 27, Issue 08, July, 2018, https://doi.org/10.1142/S0218126618501220

[42] Satyabrata Dash, Deepak Joshi, **Gaurav Trivedi**, Multiobjective Analog/RF Circuit Sizing using an Improved Brain Storm Optimization Algorithm, in Memetic Computing, May, 2018. DOI: https://doi.org/10.1007/s12293-018-0262-9.

[43] Satyabrata Dash, Sukanta Dey, Deepak Joshi, **Gaurav Trivedi**, Minimizing Area of VLSI Power Distribution Networks Using River Formation Dynamics, Journal of Systems and Information Technology, Vol. 20. Issue: 4, February, 2018, pp. 417-429

[44] Satyabrata Dash, Deepak Joshi, **Gaurav Trivedi**, Multiobjective Analog/RF Circuit Sizing using an Improved Brain Storm Optimization Algorithm, in Memetic Computing, 10, pp. 423–440, 2018.

[45] Sunil Dutt, Sukumar Nandi, **Gaurav Trivedi,** Accuracy Enhancement of Equal Segment Based Approximate Adders, IET Computers & Digital Techniques, Volume 12, Issue 5, September 2018, pp. 206-215

[46] Dheeraj Kumar Sinha, M. S. Ansari, Ashok Ray, **Gaurav Trivedi**, Amitabh Chatterjee, and Ronald D. Schrimpf, Fast Ionization-front Induced Anomalous Switching Behavior in Trigger Bipolar Transistors of Marx-bank Circuits Under Base-drive Conditions, IEEE Transactions on Plasma Science, Volume 46, Issue 6, June 2018, pp. 2064-2071

[47] Sunil Dutt, Sukumar Nandi, **Gaurav Trivedi**, "Analysis and Design of Adders for Approximate Computing", ACM Transactions on Embedded Computing Systems (TECS) - Volume 17 Issue 2, April 2018

[48] Satyabrata Dash, Deepak Joshi, Ayushparth Sharma, **Gaurav Trivedi**, "A hierarchy in mutation of genetic algorithm and its application to multi-objective analog/RF circuit optimization", Analog Integrated Circuits and Signal Processing, Volume 94, Issue 1, January 2018, pp 27–47

[49] Deepak Joshi, Satyabrata Dash, H. S.Jatana, Ratnajit Bhattacharjee, **Gaurav Trivedi**, "Analog circuit optimization using adjoint network based sensitivity analysis", Elsevier AEU - International Journal of Electronics and Communications, December 2017 pp. 221-225

[50] Praveen Tiwari, Munish Manas, Pidanic Jan, Zdenek Nemec, Dolecek Radovan, Pinakeswar Mahanta, **Gaurav Trivedi**, "A Review on Microgrid Based on Hybrid Renewable Energy Sources in South-Asian Perspective", Springer Technology and Economics of Smart Grids and Sustainable Energy, December 2017, 2:10

[51] Sameer Pawanekar, Kalpesh Kapoor and **Gaurav Trivedi**, "NAP: A Nonlinear Analytical Hypergraph Partitioning Method", Published in IETE Journal of Research, Taylor & Francis, October 2016, pp. 60-70

[52] Hemangee K. Kapoor, G. Bhoopal Rao, Sharique Arshi and **Gaurav Trivedi**, "A Security Framework for NoC Using Authenticated Encryption and Session Keys",

Circuits, Systems and Signal Processing, Springer, DOI 10.1007/s00034-013-9568-5, February 2013

Conferences:

[1] Parmita Roy, Abhigyan Hazarika, Dr. Gaurav Trivedi, “Design of VTFET based biosensor utilizing Ambipolar Current in detection mechanism,” EDKCON 2024 (Accepted)

[2] D. S. Hegde, M. Dalai, M. Prajapati, S. B. Patkar and G. Trivedi, "Rapid Prototyping of CRYSTALS-Kyber Primitives on FPGA using Python-only HW-SW Flow," 2024 28th International Symposium on VLSI Design and Test (VDAT), Vellore, India, 2024, pp. 1-6, doi: 10.1109/VDAT63601.2024.10705702

[3] P. Tiwari, M. K. Kocherla, S. Nandanapu, P. Mahanta and G. Trivedi, "IoT-Enabled RC4-Stream-Cipher Powered Edge Data Encryption for Smart Home," 2024 International Conference on Electrical, Computer and Energy Technologies (ICECET, Sydney, Australia, 2024, pp. 1-6, doi: 10.1109/ICECET61485.2024.10698342

[4] B. Boro, R. Parmar, A. Dongre and G. Trivedi, "Reprogrammable Time-Domain RRAM Based Vector Matrix Multiplier for In-Memory Computing," 2024 25th International Symposium on Quality Electronic Design (ISQED), San Francisco, CA, USA, 2024, pp. 1-8, doi: 10.1109/ISQED60706.2024.10528699

[5] B. Boro, A. Dongre, R. Parmar and G. Trivedi, "Programmable Binary Weighted Time-Domain Vector Matrix Multiplier for In-Memory Computing," 2023 IEEE Asia Pacific Conference on Circuits and Systems (APCCAS), Hyderabad, India, 2023, pp. 261-265, doi: 10.1109/APCCAS60141.2023.00066

[6] P. Tiwari, S. Asma, N. G. U, P. Mahanta and G. Trivedi, "Load-Data Imputation and Economic Feasibility Analysis of an Academic Institution," 2023 International Conference on Electrical, Computer and Energy Technologies (ICECET), Cape Town, South Africa, 2023, pp. 1-6, doi: 10.1109/ICECET58911.2023.10389395

[7] Y. R. Ananda, S. Das and G. Trivedi, "A Novel Dynamic Memristor Window Function for High Frequency Applications," 2023 21st IEEE Interregional NEWCAS Conference (NEWCAS), Edinburgh, United Kingdom, 2023, pp. 1-5, doi: 10.1109/NEWCAS57931.2023.10198059

[8] A. B. Kalita, S. C. Rajbongshi and G. Trivedi, "Hybrid multi-objective constrained optimization based on feasibility segregation, non-dominated sorting and crowding distance," 2023 10th International Conference on Signal Processing and Integrated Networks (SPIN), Noida, India, 2023, pp. 7-13, doi: 10.1109/SPIN57001.2023.10116769

[9] A. Dongre and **Gaurav Trivedi**, "Binary Synaptic Array for Inference and Training with Built-in RRAM Electroforming Circuit," 2023 24th International Symposium on Quality Electronic Design (ISQED), San Francisco, CA, USA, 2023, pp. 1-6, doi: 10.1109/ISQED57927.2023.10129360.

[10] Y. R. Ananda, S. Das and **Gaurav Trivedi**, "A Novel Dynamic Memristor Window Function for High Frequency Applications," 2023 21st IEEE Interregional NEWCAS Conference (NEWCAS), Edinburgh, United Kingdom, 2023, pp. 1-5, doi: 10.1109/NEWCAS57931.2023.10198059.

[11] Y. R. Ananda, A. Hajra and **Gaurav Trivedi**, "An Adaptive Window Function based Memristor Model," 2023 33rd International Conference Radioelektronika (RADIOELEKTRONIKA), Pardubice, Czech Republic, 2023, pp. 1-5, doi: 10.1109/RADIOELEKTRONIKA57919.2023.10109029.

[12] S. S. P. Goswami and **Gaurav Trivedi**, "Comparison of Hardware Implementations of Cryptographic Algorithms for IoT Applications," 2023 33rd International Conference Radioelektronika (RADIOELEKTRONIKA), Pardubice, Czech Republic, 2023, pp. 1-6, doi: 10.1109/RADIOELEKTRONIKA57919.2023.10109046.

[13] A. Tiwari, P. Guha, **Gaurav Trivedi**, N. Gupta, N. Jayaraj and J. Pidanic, "IndiRA: Design and Implementation of a Pipelined RISC-V Processor," 2023 33rd International Conference Radioelektronika (RADIOELEKTRONIKA), Pardubice, Czech Republic, 2023, pp. 1-6, doi: 10.1109/RADIOELEKTRONIKA57919.2023.10109058.

[14] A. B. Kalita, S. C. Rajbongshi and **Gaurav Trivedi**, "Hybrid multi-objective constrained optimization based on feasibility segregation, non-dominated sorting and crowding distance," 2023 10th International Conference on Signal Processing and

Integrated Networks (SPIN), Noida, India, 2023, pp. 7-13, doi: 10.1109/SPIN57001.2023.10116769.

[15] Shubham Garg and **Gaurav Trivedi**, Blockchain Mining Simulation using Verilog, Accepted to ETTIS 2023

[16] S. M. Mishra, Ankita Tiwari, Hanumant Singh Shekhawat, Prithwijit Guha, Jan Pidanic, Nemec Zdenek, **Gaurav Trivedi**, Comparison of Floating-point Representations for the Efficient Implementation of Machine Learning Algorithms, 2022 32nd International Conference Radioelektronika (RADIOELEKTRONIKA), Kosice, Slovakia, 2022, pp. 1-6, doi: 10.1109/RADIOELEKTRONIKA54537.2022.9764927.

[17] A. Tiwari, S. M. Mishra, P. Guha, P. Jan, Z. Nemec and **Gaurav Trivedi**, Design of a Low Power and Area Efficient Bfloat16 based Generalized Systolic Array for DNN Applications, 32nd International Conference Radioelektronika (RADIOELEKTRONIKA), Kosice, Slovakia, 2022, pp. 1-5, doi: 10.1109/RADIOELEKTRONIKA54537.2022.9764899.

[18] M. Janveja, R. Parmar, **Gaurav Trivedi**, P. Jan and Z. Nemec, An Energy Efficient and Resource Optimal VLSI Architecture for ECG Feature Extraction for Wearable Healthcare Applications, 2022 32nd International Conference Radioelektronika (RADIOELEKTRONIKA), Kosice, Slovakia, 2022, pp. 1-6, doi: 10.1109/RADIOELEKTRONIKA54537.2022.9764910.

[19] J. Pidanic, A. Vyas, R. Karki, P. Vij, **Gaurav Trivedi** and Z. Nemec, A Scalable and Adaptive Convolutional Neural Network Accelerator, 2022 32nd International Conference Radioelektronika (RADIOELEKTRONIKA), Kosice, Slovakia, 2022, pp. 01-05, doi: 10.1109/RADIOELEKTRONIKA54537.2022.9764951.

[20] S. M. Mishra, H. S. Shekhawat, **Gaurav Trivedi**, P. Jan and Z. Nemec, Design and Implementation of a Low Power Area Efficient Bfloat16 based CORDIC Processor, 2022 32nd International Conference Radioelektronika (RADIOELEKTRONIKA), Kosice, Slovakia, 2022, pp. 1-6, doi: 10.1109/RADIOELEKTRONIKA54537.2022.9764911.

[21] R. Parmar, M. Janveja, **Gaurav Trivedi**, P. Jan and Z. Nemec, An Area and Power Efficient VLSI Architecture to Detect Obstructive Sleep Apnea for Wearable Devices, 32nd International Conference Radioelektronika (RADIOELEKTRONIKA), Kosice, Slovakia, 2022, pp. 1-5, doi: 10.1109/RADIOELEKTRONIKA54537.2022.9764917.

[22] H. I. Muhammad, A Tiwari, **Gaurav Trivedi**, A Survey of Learning Methods in Deep Neural Networks (DDN). In: Noor, A., Saroha, K., Pricop, E., Sen, A., Trivedi, G. (eds) Proceedings of Emerging Trends and Technologies on Intelligent Systems. Advances in Intelligent Systems and Computing, vol 1414. Springer, March 2022, pp. 189-204, https://doi.org/10.1007/978-981-19-4182-5_16

[23] S. Bordoloi, A. Ray P. Barman, and **Gaurav Trivedi**, Investigation of Electric Field Profile and associate parameters with Embedded Metal Layer in Field Plate AlGaN/GaN HEMTs, 2nd International Conference on Computational Intelligence & IoT (ICCIIoT), Journal of Physics: Conference Series, IOP Publishing, vol. 2236, no. 1, pp. 012005, March 2022, https://dx.doi.org/10.1088/1742-6596/2236/1/012005

[24] Praveen Tiwari, P. Mahanta, **Gaurav Trivedi**, A Dual-Stage Attention based RNN-Model for Short Term Load Forecasting of Individual Household, International Conference on Electrical, Computer and Energy Technologies (ICECET), Cape Town, South Africa, 2021, pp. 1-6, doi: 10.1109/ICECET52533.2021.9698650.

[25] Abreha, B.G., P. Mahanta, **Gaurav Trivedi**, Performance Improvement Techniques in Shell-and-Tube Type of LHS Unit. In: Mahanta, P., Kalita, P., Paul, A., Banerjee, A. (eds) Advances in Thermofluids and Renewable Energy, Lecture Notes in Mechanical Engineering. Springer, October, 2021, pp. 153-163, https://doi.org/10.1007/978-981-16-3497-0_12

[26] M. Janveja, M. Tantuway, K. Chaudhari and **Gaurav Trivedi**, Design of Low Power VLSI Architecture for Classification of Arrhythmic Beats Using DNN for Wearable Device Applications, 2021 IEEE Nordic Circuits and Systems Conference (NorCAS), 2021, pp. 1-6, doi: 10.1109/NorCAS53631.2021.9599864

[27] S. Bordoloi, A. Ray and **Gaurav Trivedi**, Numerical analysis of the Impact of Gate Geometry variations on the Reliability of AlGaN/GaN HEMT, IEEE 4th International Conference on Computing, Power and Communication Technologies (GUCON) 2021, pp. 1-5, doi: 10.1109/GUCON50781.2021.9573607, 24-26 Sep, 2021, Kuala Lumpur, Malaysia

[28] Ankita Tiwari, Prithwijit Guha, and **Gaurav Trivedi**, Design of a Low Power Bfloat16 Pipelined MAC Unit for Deep Neural Network Applications, IEEE Region 10 Symposium (TENSYMP), 2021, pp. 1-8, doi: 10.1109/TENSYMP52854.2021.9550912

[29] Sukanta Dey, Sukumar Nandi and **Gaurav Trivedi**, Machine Learning for VLSI CAD: A Case Study in On-Chip Power Grid Design, 2021 IEEE Computer Society Annual Symposium on VLSI (ISVLSI), 2021, pp. 378-383, doi: 10.1109/ISVLSI51109.2021.00075

[30] S Hussain and R Kumar and **Gaurav Trivedi**, Comparison of NMOS and PMOS Input Driving Dynamic Comparator in 45nm Technology, IOP Conference Series: Materials Science and Engineering, vol. 1020, no. 1, pp. 012022, January, 2021, https://dx.doi.org/10.1088/1757-899X/1020/1/012022

[31] Berihu Gebreyohannes Abreha, Pinakeswar Mahanta, and **Gaurav Trivedi**, Performance improvement techniques in shell-and-tube type of LHS, International Conference on Recent Trends in Developments of Thermo-fluids and Renewable Energy, November 26 – 28, 2020

[32] Shikhar Gupta, Arpan Vyas, and **Gaurav Trivedi**, FPGA Implementation of Simplified Spiking Neural Network, The 27th IEEE International Conference on Electronics Circuits and Systems, November 23-25, 2020, Glasgow, Scotland, pp. 1-4, doi: 10.1109/ICECS49266.2020.9294790

[33] Meenali Janveja, Bikram Paul, Gonella Vijayakanthi, Astha Agrawal, **Gaurav Trivedi**, Pidanic Jan and Zdenek Nemec, Design of Efficient AES Architecture for Secure ECG Signal Transmission for Low-power IoT Applications, IEEE 30th International Conference Radioelecktronika, April 2020, pp. 1-6, doi: 10.1109/RADIOELEKTRONIKA49387.2020.9092417

[34] Sushree Sila P. Goswami, Bikram Paul, Sunil Dutt and **Gaurav Trivedi**, Comparative Review of Approximate Multipliers, IEEE 30th International Conference Radioelecktronika, April 2020, pp. 1-6, doi: 10.1109/RADIOELEKTRONIKA49387.2020.9092370

[35] Krishna Mohan Dwivedi, **Gaurav Trivedi** and Sunil K Khijwania, Theoretical Analysis of Apodized Fiber Bragg Grating Sensors for Single and Quasi-distributed Structural Health Monitoring Applications, IEEE 30th International Conference Radioelecktronika, April 2020, pp. 1-6, doi: 10.1109/RADIOELEKTRONIKA49387.2020.9092399

[36] Sukanta Dey, Sukumar Nandi, **Gaurav Trivedi**, PowerPlanningDL: Reliability-Aware Framework for On-Chip Power Grid Design using Deep Learning, IEEE/ACM Design, Automation and Test in Europe (DATE 2020), Grenoble, France, March 9-13, 2020, pp. 1520–1525

[37] Swati Shukla and **Gaurav Trivedi,** EMT analysis of heavy-duty EV in charging station, Electronic Systems and Intelligent Computing (ESIC 2020). Lecture Notes in Electrical Engineering (LNEE), vol 686, pp. 993-1002, September 2020. Springer, Singapore

[38] S. Hussain, R. Kumar and **Gaurav Trivedi**, Resolution Selective 2 to 6 - bit Flash ADC in 45nm Technology, Electronic Systems and Intelligent Computing (ESIC 2020). Lecture Notes in Electrical Engineering (LNEE), vol 686, pp. 475-483, September 2020. Springer, Singapore.

[39] Krishna Mohan Dwivedi, Sunil K Khijwania, **Gaurav Trivedi**, and Tomasz Osuch, Theoretical Analysis of pi-Phase-Shifted Fiber Bragg Grating for Longitudinal Ultrasonic Acoustic Wave, IEEE Workshop on Recent Advances in Photonics (WRAP), 13-14 December, pp. 1-3, 2019, doi: 10.1109/WRAP47485.2019.9013692

[40] Ajeyo Dey, Satyabrata Dash, Likhita Tumati, Saumitra Sharma, Nikhil Megharajani, Meenali Janveja, Ismael Rodríguez, **Gaurav Trivedi**, A Cooperative Co-evolution based Scalable Framework for Solving Large-Scale Global Optimization Problems, 2019 IEEE International Conference on Systems, Man and Cybernetics (SMC), Bari, Italy, October, 2019, pp. 1689-1694.

[41] Satyabrata Dash and **Gaurav Trivedi**, Convergence Analysis of River Formation Dynamics Algorithm, 2019 IEEE International Conference on Systems, Man and Cybernetics (SMC), Bari, Italy, October, 2019, pp. 2053-2058

[42] Sunil Dutt, Jan Pidanic, Zdenek Nemec, Sukumar Nandi, **Gaurav Trivedi**, Integrated ABB and DVS: A Post-Silicon Tuning Approach for Parametric Yield Enhancement in Sub-45nm CMOS Technology, IEEE 29th International Conference Radioelektronika (RADIOELEKTRONIKA), Pardubice, Czech Republic, April, 2019, pp. 1-6

[43] Krishna Mohan Dwivedi, Tomasz Osuch, Karel Juryca, Jan Pidanic, **Gaurav Trivedi**, Theoretical Analysis of Slow-light in π -phase-shifted fiber Bragg grating for sensing applications, IEEE Conference on Microwave Techniques (COMITE), April, 2019, pp. 1-6

[44] Bikram Paul, Pidanic Jan, Zdenek Nemec, **Gaurav Trivedi**, Efficient PRNG Design and Implementation for Various High Throughput Cryptographic and Low Power Security Application, IEEE 29th International Conference Radioelektronika (RADIOELEKTRONIKA), Pardubice, Czech Republic, April, 2019, pp. 1-6, (**3rd Prize in the BEST Student Paper Category IEEE Czechoslovakia Section**)

[45] Swati Shukla, Praveen Tiwari, Pidanic Jan, Zdenek Nemec, **Gaurav Trivedi**, Object Oriented EMT simulation framework for On-Grid Centralized Microgrid, IEEE 29th International Conference Radioelektronika (RADIOELEKTRONIKA), Pardubice, Czech Republic, April, 2019, pp. 1-6

[46] Satyabrata Dash, Sukanta Dey, Anish Augustine, Rudra Sankar Dhar, Jan Pidanic, Zdenek Nemec, **Gaurav Trivedi**, RiverOpt: A Multiobjective Optimization Framework based on Modified River Formation Dynamics Heuristic, 32nd International Conference on VLSI Design and 18th International Conference on Embedded Systems (VLSID), January, 2019, pp. 233-238

[47] Bikram Paul, Sushree Sila P. Goswami, Apratim Khobragade, Sunil Dutt, Javvaji Sai Soumith, and **Gaurav Trivedi**, Design and Implementation of Low-power High-throughput PRNGs for Security Applications, 32nd International Conference on VLSI Design and 18th International Conference on Embedded Systems (VLSID), January, 2019, pp. 535-536

[48] Koushik Bharadwaj, Ashok Ray, Sushanta Bordoloi and **Gaurav Trivedi**, Current Collapse reduction technique using N-doped buffer layer into the bulk region of a Gate Injection Transistor, 32nd International Conference on VLSI Design and 18th International Conference on Embedded Systems (VLSID), January, 2019, pp. 494-495

[49] Krishna Mohan Dwivedi, **Gaurav Trivedi**, and Sunil K Khijwania, A Sensitive Enhanced Acousto-ultrasonic Sensor using π-Fiber Bragg Grating and Interferometric interrogation, Photonics, December, 2018

[50] Krishna Mohan Dwivedi, **Gaurav Trivedi**, and Sunil K Khijwania, Theoretical Analysis of Fiber Bragg Grating Employing Novel Apodization Profile, Photonics, December, 2018

[51] Krishna Mohan Dwivedi, **Gaurav Trivedi**, and Sunil K Khijwania, Study of Slow-Light in π-phase shifted Fiber Bragg Grating, Photonics, December, 2018

[52] Berihu Geberyohannes Abreha, Pinakeswar Mahanta, and **Gaurav Trivedi**, Numerical Comparative Study of Thermal Energy Storage for Solar Cooking, National Conference on Waste to Energy Conversion (NCWEC-2018), December 2018

[53] Sukanta Dey, Satyabrata Dash, Sukumar Nandi and **Gaurav Trivedi**, PGIREM: Reliability-Constrained IR Drop Minimization and Electromigration Assessment of VLSI Power Grid Networks using Cooperative Coevolution, IEEE Computer Society Annual Symposium on VLSI (ISVLSI), Hong Kong, 2018, pp. 40-45.

[54] Amit Jonak Bora, Rohit Reddy, Srinath Satpathy, H. Balachander, V. Vijendra, Rohit Sinha, **Gaurav Trivedi**, "Power Efficient Speaker Verification Using Linear Predictive Coding on FPGA", IEEE International Conference on Control, Communication and Computing, Thiruvananthapuram, 2018, pp. 260-265, doi: 10.1109/CETIC4.2018.8530925

[55] Sarfraz Hussain, Rajesh Kumar and **Gaurav Trivedi**, "A novel low power high speed BEC for 2GHz sampling rate Flash ADC in 45nm technology", 3rd IEEE International Symposium on Nanoelectronic and Information Systems (IEEE-iNIS), December 2017, pp. 133 – 138

[56] Sarfraz Hussain, Rajesh Kumar and **Gaurav Triv**edi, "Comparison and design of dynamic comparator in 180nm SCL technology for low power and high speed Flash ADC", 3rd IEEE International Symposium on Nanoelectronic and Information Systems (IEEE-iNIS), December 2017, pp. 139 – 144

[57] Pankaj Kumar; Syed Samsuz Zaman; Mansh Pratim Sarma; Ashok Ray, **Gaurav Trivedi**, "Basic CMOS Gate Design by Mixed-Mode Analysis of Step-Channel TMDG-MOSFET", IEEE International Symposium on Nanoelectronic and Information Systems (IEEE-iNIS), December 2017, pp. 173-178

[58] Syed Samsuz Zaman; Pankaj Kumar; Manash Pratim Sarma; Ashok Ray, **Gaurav Trivedi**, "Design and Simulation of SF-FinFET and SD-FinFET and Their Performance in Analog, RF and Digital Applications", IEEE International Symposium on Nanoelectronic and Information Systems (IEEE-iNIS), December 2017, pp. 200-205

[59] Sridevi Guguothu, Gaurav Kumar, Harshal B. Nemade and **Gaurav Trivedi**, "Design of a FEM Based Simulator for MEMS Devices", IEEE Region 10 Conference (TENCON) 2017, November 2017, pp. 1670 – 1675

[60] Sunil Dutt, Bikram Paul, Anshu Chauhan, Sukumar Nandi and **Gaurav Trivedi**, "ApproxHash: Delay, Power and Area Optimized Approximate Hash Functions for Cryptography Applications", ACM 10th International Conference On Security of Information and Networks, October 2017, pp. 291-294

[61] Ashok Kumar Ray, Gaurav Kumar, Dheeraj Sinha, Pratima Agarwal, **Gaurav Trivedi**, "FEM based Device Simulator for High Voltage Devices", VLSI Design and Test (VDAT) 2017, June, 2017, pp. 127-135

[62] Sameer Pawanekar and **Gaurav Trivedi**, "Analytical Partitioning: Improvement over FM", VLSI Design and Test (VDAT) 2017, June, 2017, pp. 718-730

[63] Sameer Pawanekar and **Gaurav Trivedi**, "Fast FPGA Placement Using Analytical Optimization", VLSI Design and Test (VDAT) 2017, June, 2017, pp. 681-693

[64] Gaurav Kumar, Mandeep Singh, Ashok Kumar Ray and **Gaurav Trivedi,** "An FEM based Framework to Simulate Semiconductor Devices Using Streamline Upwind Petrov-Galerkin Stabilization Technique", IEEE Microwave and Radio Electronics Week 2017, Brno, Czech Republic, April, 2017, pp. 1-5

[65] Gaurav Kumar, Mandeep Singh, Debashish Nandi and **Gaurav Trivedi**, "Bandgap Generation in 2D Materials", IEEE DevIC 2017, pp. 551 – 555

[66] Sridevi Gugulothu, Gaurav Kumar, Sushanta Kundu, Harshal B Nemade, **Gaurav Trivedi**, "Design Of a Next Generation Framework For MEMS Devices", IEEE DevIC 2017, pp. 546 – 550

[67] Deepak Joshi, Satyabrata Dash, Ayush Malhotra, Pulimi Venkata Sai, Rahul Das, Dikshit Sharma and **Gaurav Trivedi**, "Optimization of 2.4 GHz CMOS Low Noise Amplifier using Hybrid Particle Swarm Optimization with Levy Flight", VLSI Design 2017, pp. 181-186

[68] Sukanta Dey, Satyabrata Dash, Sukumar Nandi and **Gaurav Trivedi**, "Markov Chain Model using Levy Flight for VLSI Power Grid Analysis", VLSI Design 2017, pp. 107-112

[69] Abhinandan Das, Lavish Yadav, Mayank Singhal, Raman Sachan, Hemang Goyal, Keshav Taparia, Raghav Gulati, Ankit Singh, **Gaurav Trivedi**, "Smart Glove for Sign Language Communications", IEEE International Conference on Accessibility to Digital World (IEEE ICADW), December, 2016, pp. 27-31

[70] Sowmyaa Gupta and **Gaurav Trivedi**,"e-KrishakMitra", IEEE International Conference on Accessibility to Digital World (IEEE ICADW), December, 2016, pp. 149-152

[71] Dipankar Bora, Ben Thomas, Sukumar Nandi and **Gaurav Trivedi**, "Application Specific Processor Design Implementation to Monitor Seismic Activity", IEEE International Conference on Accessibility to Digital World (IEEE ICADW), December, 2016, pp. 9-14

[72] Anupam Boro, Ben Thomas, Shaik Rafi Ahamed and **Gaurav Trivedi**, "FPGA Implementation of a Dedicated Processor for Temperature Prediction", IEEE International Conference on Accessibility to Digital World (IEEE ICADW), December, 2016, pp. 21-26

[73] Gaurav Kumar, Mandeep Singh, Bulusu Anand and **Gaurav Trivedi**, "A Parallel Device Simulator Based on Discontinuous Galerkin Finite Element Method ", XXVII IUPAP Conference on Computational Physics (CCP2015), Journal of Physics Conference Series 759 (2016) 012093, 1-6

[74] Dheeraj Kumar Sinha, Amitabh Chatterjee and **Gaurav Trivedi**, "Two Dimensional Numerical Simulator for Modeling NDC Region in SNDC Devices", XXVII IUPAP Conference on Computational Physics (CCP2015), Journal of Physics Conference Series 759 (2016) 012093, pp. 1-6

[75] Mandeep Singh, Gaurav Kumar, Sushanta Bordoloi and **Gaurav Trivedi**, "A study on modeling and simulation of Multiple-Gate MOSFETs", XXVII IUPAP Conference on Computational Physics (CCP2015), Journal of Physics Conference Series 759 (2016), 012093, pp. 1-6

[76] Swati Shukla, Prince A., **Gaurav Trivedi,** "Power Distribution Network Model of Jail Substation of Guwahati City For EMT Analysis", International Conference on Next Generation Intelligent Systems (ICNGIS), 2016 , pp. 1-6

[77] Sunil Dutt, Sukumar Nandi and **Gaurav Trivedi**, "A comparative survey of approximate adders", 26th International Conference Radioelektronika (RADIOELEKTRONIKA), 2016, pp. 61-65

[78] Satyabrata Dash, Deepak Joshi, **Gaurav Trivedi**, "CMOS Analog Circuit Optimization via River Formation Dynamics," 26th International Conference Radioelektronika, 2016, pp. 61-65 **"Best Paper Award"**

[79] Satyabrata Dash, Krishna Lal Baishnab, Gaurav Trivedi, "Applying River Formation Dynamics to Analyze VLSI Power Grid Networks," 29th International Conference on VLSI Design (2016), Kolkata, pp. 258-263 "Honorable Mention Award"

[80] Dheeraj Kumar Sinha, Amitabh Chatterjee, Vishnuram Abhinav, **Gaurav Trivedi** and Victor Koldyaev, "A Novel Capacitorless DRAM Cell Design using Band-gap Engineered Junctionless Double-gate FET", 29th International Conference on VLSI Design (2016), Kolkata, pp. 312-317

[81] Sunil Dutt, Harsh Patel, Sukumar Nandi and **Gaurav Trivedi**, "Exploring Approximate Computing for Yield Improvement via Re-design of Adders for Error Resilient Applications," 29th International Conference on VLSI Design (2016), Kolkata, pp. 134-139

[82] Deepak Joshi, Satyabrata Dash, Ujjawal Agarwal, Ratnajit Bhattacharjee and **Gaurav Trivedi**, "Analog Circuit Optimization Based on Hybrid Particle Swarm

Optimization", International Conference on Computational Science and Computational Intelligence (CSCI 2015), Las Vegas, USA, pp. 164-169

[83] Gaurav Kumar, Mandeep Kumar, Bulusu Anand and **Gaurav Trivedi**, "A Parallel Device Simulator based on Finite Element Method", International Conference on Computational Science and Computational Intelligence (CSCI 2015), Las Vegas, USA, pp. 30-35

[84] Dheeraj Kumar Sinha, Amitabh Chatterjee, **Gaurav Trivedi** and Victor Koldyaev, "Design of Band-gap Engineered Silicon-Germanium Junctionless Double-gate FET for ZRAM application," 6th International Conference on Computers and Devices for Communication (CODEC 2015), Kolkata, pp. 1-4

[85] Sameer Pawanekar, **Gaurav Trivedi**, "Net Weighing Based Timing Driven Standard Cell Placer", 19th International Symposium on VLSI Design and Test (VDAT) 2015, pp. 1-6

[86] Sameer Pawanekar, **Gaurav Trivedi**, "TSV Aware Standard Cell Placement Tool for 3D ICs", 19th International Symposium on VLSI Design and Test (VDAT) 2015, pp. 1-6

[87] Satyabrata Dash, Vivek Bangera, Vinay B. Y. Kumar, **Gaurav Trivedi**, Sachin B. Patkar, "Parallel Two Step Random Walk Algorithm to Analyze VLSI Power Grid Networks", 19th International Symposium on VLSI Design and Test (VDAT) 2015, pp. 1-2

[88] Satyabrata Dash, Vivek Bangera, Vinay B. Y. Kumar, Sachin B. Patkar and **Gaurav Trivedi**, "Power grid analysis on parallel computing platforms", 25th International Conference Radioelektronika, Microwave and Radioelectronics Week (MAREW) 2015, Czech Republic, pp. 89-93

[89] Deepak Joshi, Satyabrata Dash, Ratnajit Bhattacharjee, **Gaurav Trivedi**, "A method of analog circuit optimization using adjoint sensitivity analysis", 25th International Conference Radioelektronika, Microwave and Radioelectronics Week (MAREW) 2015, Czech Republic, pp. 75-80, "**Best Paper Award**".

[90] Sunil Dutt, Anshu Chauhan, Sukumar Nandi and **Gaurav Trivedi**, "Variability-aware Parametric Yield Enhancement via Post-silicon Tuning of Hybrid Redundant

Radix-2 MAC Units “, 2015 International Symposium on VLSI Design, Automation and Test (2015 VLSI-DAT), Hsinchu, Taiwan, pp. 1-4

[91] Sunil Dutt, Anshu Chauhan, Rahul Bhadoriya, Sukumar Nandi and **Gaurav Trivedi**, “A High-performance Energy-efficient Hybrid Redundant MAC for Error-resilient Applications”, 28th International Conference on VLSI Design, January 2015, pp. 351-356

[92] Sameer Pawanekar, Kalpesh Kapoor and **Gaurav Trivedi**, “A Nonlinear Analytical Optimization Method for Standard Cell Placement of VLSI Circuits”, 28th International Conference on VLSI Design, January 2015, pp. 423-428

[93] Shreyasee Debnath, Manashwi Tamuli, Ashok Kumar Ray, **Gaurav Trivedi**, “A Review on accelerating scientific computations using the Conjugate Gradient Method”, IEEE International Conference on Electronic Design, Computer Networks & Automated Verification, January 2015, pp. 150-153

[94] I. K. Patan, P. Kumar and **Gaurav Trivedi**, “Design and Implementation Of Controllers For Contactless Power Transfer On FPGA”, 9th IEEE International Conference on Industrial and Information Systems (ICIIS 2014), pp. 1-6, December 2014.

[95] Pidanic Jan, Shejbal Tomas, Nemec Zdenek, Dolecek Radek, **Gaurav Trivedi**, and Ratnajit Bhattacharjee, “An Optimization of a PHD function for Association of Targets on Multistatic Radar”, Proceedings of RADARCON 2014, Cincinnati, Ohio, USA, May 2014, pp. 1084-1089

[96] Sameer Pawanekar, Kalpesh Kapoor, and **Gaurav Trivedi**, “Kapees: A New Tool for Standard Cell Placement”, Proceedings of VLSI Design and Test, Springer-Verlag, pp. 66-73, July 2013

[97] **Gaurav Trivedi** and H. Narayanan, Application of Fast DC Analysis to Partitioning Hypergraphs, ISCAS 2007, pp. 3407-3410

[98] **Gaurav Trivedi**, Madhav P. Desai and H. Narayanan, Parallelization of DC Analysis through Multiport Decomposition, accepted at 20th International Conference on VLSI Design, 2007, pp 863-868

[99] **Gaurav Trivedi**, Sumit Punglia and H. Narayanan, Application of DC Analyzer

to Combinatorial Optimization Problems, accepted at 20th International Conference on VLSI Design, 2007, pp 869-874

[100] **Gaurav Trivedi**, Madhav P. Desai and H. Narayanan, Fast DC Analysis and its Application to Combinatorial Optimization Problems, 19th International Conference on VLSI Design, 2006, pp 695- 700.

[101] G. Anil Kumar, **Gaurav Trivedi**, Madhav P. Desai and H. Narayanan, Parallelization of DC Analyzer, HPC Asia 2002, 6th International Conference on High Performance Computing in Asia Pacific Region, 2002, pp 555-556.

Poster Presentations

[1] Dheeraj Kumar Sinha, Amitabh Chatterjee, **Gaurav Trivedi** and Victor Koldyaev, "Analysis and Design of ZRAM Cell for Low Voltage Operations," 18th International Workshop on Physics of Semiconductor Devices (IWPSD 2015), Bangalore.

[2] Gaurav Kumar, Mandeep Singh, Anand Bulusu and **Gaurav Trivedi**, "A Parallel Device Simulator Based on Discontinuous Galerkin Finite Element Method", 18th International Workshop on Physics of Semiconductor Devices (IWPSD 2015), Bangalore.

[3] Sushanta Bordoloi, Gaurav Kumar, Mandeep Singh, and **Gaurav Trivedi**, "A Review on Issues in Device Modeling at Liquid Nitrogen Temperature", XXVII IUPAP Conference on Computational Physics (CCP 2015), Guwahati.

[4] Ashok Ray, Gaurav Kumar, Mandeep Singh, P. Agarawal and **Gaurav Trivedi**, "Silicon Carbide: An emerging material for high power device applications", XXVII IUPAP Conference on Computational Physics, (CCP 2015), Guwahati.

Patents filed/granted with details

[1] Generic multicore processor with multi co-processors and multiple I/Os arranged in a honeycomb structure with artificial intelligence capabilities by **Gaurav Trivedi**, Bikram Paul, Sushree Sila P. Goswami, Gaurav Aggarwal, Rahul Kande, Ben Thomas, Arpan Vyas, Rishav Karki, Tejaswini Bandlamudi, Tanmay Tamia, Namathoti Siva ( ) (Published)

[2] **Gaurav Trivedi**, Smarajit Das, Sqn Ldr Vijay Sengar, Autonomous Air to Air Refueling Avionics System using Convolution Neural Networks, (Provisional Indian Patent No: E-2/258/2018/KOL) (Published)

[3] **Gaurav Trivedi**, Swati Shukla, Balbir Singh, Abhishek Agarwal, Bikram Paul, FPGA based Electromagnetic transient analyzer for the design of EV's charging station, (Provisional Indian Patent No: E-2/274/2018/KOL) (Published)

[4] **Gaurav Trivedi**, Anand Bulusu, Aakash Kumar, "Hanumart: Hospitality Amenity Necessity Utility Mart driven by real time person specific demand and supply model and enabled by artificial intelligence," (Provisional Indian Patent No: E-2/265/2018/KOL) (Published)

[5] Sameer Pawanekar, Kalpesh Kapoor and **Gaurav Trivedi**, 'A Nonlinear Analytical Method and System for Hypergraph Partitioning," Indian Patent App. No. 347/KOL/2015, 27 March 2015

[6] **Gaurav Trivedi**, Yogesh Dilip Save, Sachin B. Patkar, Mahesh B. Patil, "Application of modified two-graph method based circuit simulator to evaluate performance of solar cell arrays in various geometries" submitted to TIFAC to file patent. (Reference No: T.I.(88)/TIFA/2013).

(k) Visiting faculty/expert:

1. Visiting Faculty, University of Pardubice, Czech Republic, May 2019 – June 2019
2. Visiting Faculty, NIT Arunachal Pradesh, Yupia, Arunachal Pradesh for 06 Days to teach a course on Algorithms for VLSI in March 2018
3. Visiting Expert, University of Pardubice, Czech Republic, November – December 2017
4. Visiting Faculty, NIT Mizoram, Aizawl, Mizoram for 04 Days to teach a course on Analog Circuit Design Optimization, November 2017
5. Visiting Faculty, IIIT Bhagalpur for 04 Days to teach a first year course partly covering the basics of microprocessors October 2017
6. Visiting Faculty, NIT Sikkim, Ravangala, Sikkim for 15 Days to teach a course on VLSI System Design, March-April 2017
7. Visiting Faculty, Atal Bihari Vajpayee Indian Institute of Information Technology and Management (ABV – IIITM) Gwalior, Madhya Pradesh, April 2015

8. Visiting Foreign Expert, University of Pardubice, Czech Republic, May 2014 – June 2014

(l) Teaching/Project Supervision:

Courses taught:

Analog Circuits Lab (UG), Basic Electronics Lab (UG), Semiconductor Devices and Circuits (UG), Basic Electrical Science (UG), Embedded Systems (UG), Introduction to VLSI Design (UG), Digital IC Design (PG), Fundamentals of VLSI CAD (UG+PG), VLSI System Design (PG), VLSI Lab-1 (PG), VLSI Lab-2 (PG), Introduction to Parallel Computing (UG+PG), Semiconductor VLSI Technology (PG), Data Structures and Algorithms (UG+PG), Data Structures and Algorithms (UG), Data Structures and Algorithms Lab (UG), Computer Systems (UG)

Project supervision:

Ph.D. thesis supervised : **20** (Completed) **01** (Submitted) **01** (Synopsis) **18** (on-going)

M.Tech. thesis supervised: **61** (Completed) and **07** (on-going)

B.Tech. thesis supervised : **76** (Completed) and **04** (on-going)

(m) Skill Development:

List of **a few selected PAN India skill development courses** done through E&ICT Academy, IIT Guwahati in the last THREE Years only, whereas total **400+ skill development courses** have been conducted so far (I am listed here as **Co-PI till 31 Jan 2022** and **later as PI**)

Sl. No.	Name of the Programme	Co-ordinator(s) Name	Association with	Start Date	End Date	Head count	Venue
1.	Behavioral Remodeling and use of ICT Tools for Classroom Delivery of Teachers	PI & Co-PI, Dr. Nabojyoti Sharma (Pandu College)	Trendsetters Career Academy	04-06-18	10-06-18	41	Pandu College
2.	Data Analytics using Python Programming	PI & Co-PI, Dr. T Gopalakrishna (Bannari	Probyto	04-06-18	08-06-18	28	Bannari Amman Institute, Tamil Nadu

		Amman Institute, Tamil Nadu)					
3.	Use of ICT tools for enhancing the Classroom Delivery of Teachers	PI & Co-PI	Techvictus	11-06-18	17-06-18	31	MSSV, Nagaon
4.	Machine Learning using Python	PI & Co-PI, Prof. P Ramesh (KITs) Mr. Veera Raghav (KITs)	Finlands Lab	25-06-18	30-06-18	33	KITs Guntur
5.	Behavioral Remodelling & use of ICT Tools for enhancing the Classroom Delivery of Teachers	PI & Co-PI	Expert organised by E&ICT Academy	22-06-18	26-06-18	35	Donbosco
6.	Python Programming	PI & Co-PI, Ms. Rekha Devi NIELIT Imphal	Expert organised by E&ICT Academy	25-06-18	29-06-18	23	NIELIT Imphal
7.	Behavioural Remodelling for enhancing Classroom Delivery of Teachers	PI & Co-PI	Expert organised by E&ICT Academy	02-07-18	08-07-18	39	MSSV, Guwahati
8.	Behavioural Remodelling for enhancing Classroom Delivery of Teachers	PI & Co-PI, Dr. Prabhakaran K.	Expert organised by E&ICT Academy	10-07-18	15-07-18	47	BP Podder Institute of Management
9.	Behavioural Remodelling and use of ICT Tools for enhancing the Classroom Delivery of	PI & Co-PI	Expert organised by E&ICT Academy	25-07-18	31-07-18	57	SFS School, Narengi

	Teachers						
10.	Internet of Things for emerging Engineering Applications	PI & Co-PI	Finlands Lab	23-07-18	28-07-18	37	VIPS, Delhi
11.	SoC: FPGA Based Design	PI & Co-PI, Prof. B Balasubramuim	CoreEL Technologies	30-07-18	03-08-18	40	NIT Trichy
12.	Data Science using R Programming	PI & Co-PI, Mr. Samrat Hore	Predictive Analytics Pvt. Ltd.	31-07-18	04-08-18	25	Tripura University
13.	Behavioral Remodeling for enhancing the Classroom Delivery of Teachers	PI & Co-PI	Expert organised by E&ICT Academy and Mantra Associates	20-08-18	29-08-18	54	Bodoland University
14.	Use of ICT Tools for Classroom Teaching	PI & Co-PI, Dr. Bhuden Saikia	Techvictus	10-09-18	16-09-18	23	Morigaon College
15.	Internet of Things : Security Issues	PI & Co-PI, Dr. Arnab Maji	Digital Shark	10-09-18	14-09-18	37	NEHU
16.	Behavioral Remodeling and use of ICT Tools for enhancing the Classroom Delivery of Teachers	PI & Co-PI	Skill Gym	12-09-18	18-09-18	28	MC College Barpeta
17.	IoT and Embedded Systems	PI & Co-PI, Dr. Paramchari	Digital Shark	24-09-18	28-09-18	38	GSSS, Mysore
18.	Behavioral Remodelling and use of ICT Tools for enhancing the Classroom Delivery of	PI & Co-PI, Dr. Kandarpa Phukan	Skill Gym	24-09-18	29-09-18	33	Handique Girls College

	Teachers						
19.	Machine Learning - Application and Frameworks	PI & Co-PI, Dr. Paramchari	Velanki	24-09-18	28-09-18	27	Sastra University
20.	Use of ICT Tools for Classroom Teaching	PI & Co-PI, Ms Arpana Nath, Ms Bandana Deka, Ms. Geetali Das	Mantra Associates	01-10-18	07-10-18	31	SBMS College
21.	Application of Synopsys Sentaurus TCAD Tool in modelling semiconductor devices	PI & Co-PI, Dr. Rudra Shankar Dhar	Eigen Technologies	08-10-18	12-10-18	24	NIT Mizoram
22.	Behavioral Remodeling & Use of ICT Tools for Classroom Delivery of Teachers	PI & Co-PI, Ms. Indira Gogoi, Dr. Munirul Hussain	Mantra Associates	22-10-18	31-10-18	46	Furkating College
23.	Use of ICT Tools for Classroom Teaching	PI & Co-PI, Dr. Runjun Phookun, Dr. Ananta Pegu	Techvictus Pvt. Ltd.	29-10-18	04-11-18	42	K C Das Commerce College
24.	Data Analysis using Statistical Software Package	PI & Co-PI, Mr. Gulala Chandra Karmakar	Techvictus Pvt. Ltd.	12-11-18	18-11-18	35	PB College, Dhubri
25.	Use of ICT Tools for Classroom Teaching	PI & Co-PI, Dr. Gyan Jyoti	Techvictus Pvt. Ltd.	12-11-18	18-11-18	38	RGB College, Guwahati
26.	Use of ICT Tools for Classroom Teaching	PI & Co-PI, Dr. Juli Thakuria	Techvictus Pvt. Ltd.	12-11-18	18-11-18	45	BKB College
27.	Use of ICT Tools for	PI & Co-PI, Mr. Paresh	Mantra Associates	12-11-18	18-11-18	53	Mangaldai College,

	Classroom Teaching	Kumar Sarmah & Mr. Santosh Borkakati					Nagaon
28.	Emerging Trends in Wireless Communication	PI & Co-PI, Dr. Joyatri Bora and Mr. Madhusudan Mishra	Scientech & Keysight	26-11-18	30-11-18	36	NERIST
29.	Behavioral Remodeling and use of ICT Tools For Classroom Delivery of Teachers	PI & Co-PI, Dr. Ripima Buzarbaruah, Mr. Biswajit Kalita	Skill Gym	26-11-18	01-12-18	25	Suren Das, Hajo
30.	Behavioral Remodeling and use of ICT Tools For Classroom Delivery of Teachers	PI & Co-PI, Dr. Dhiraj Talukdar, Dr. Dhanju Mani Pathak	Mantra Associates	26-11-18	02-12-18	54	Nalbari College
31.	Behavioral Remodeling and use of ICT Tools For Classroom Delivery of Teachers	PI & Co-PI, Dr. Dwipen Bezbaruah	Mantra Associates	03-12-18	08-12-18	19	Gauhati University
32.	IoT & Embedded System Design	PI & Co-PI, Mr. S. Ch. Vijaya Bhaskar	Digital Shark	03-12-18	08-12-18	38	MVSR, Hyderabad
33.	Behavioral Remodeling and use of ICT Tools For Classroom Delivery of Teachers	PI & Co-PI, Dr. Gautomi Dutta Borah, Mr. Prasenjit Borkakoti	Mantra Associates	10-12-18	16-12-18	41	Dr. R.K.B. Law College

34.	VLSI DESIGN	PI & Co-PI, Prof. Rashi Borgohain	PSG College	17-12-18	29-12-18	33	AEC, Guwahati
35.	Data Analytics using R Programming	PI & Co-PI, Dr. Samir Sarkar	Predictive Analytics	08-01-19	12-01-19	37	Gauhati University
36.	Behavioral Remodelling and Use of ICT Tools for classroom delivery of Teachers	PI & Co-PI, Mr. Sujan Krishna Samanta	SkillGym Pvt. Ltd.	09-01-19	15-01-19	37	Netaji Subhash Engineering College, Garia, Kolkata
37.	Behavioral Remodelling and Use of ICT Tools for classroom delivery of Teachers	PI & Co-PI, Mr. Aniruddha Bera	SkillGym Pvt. Ltd.	14-01-19	19-01-19	36	Dr. B.C.Roy Polytechnic, Durgapur, West Bengal
38.	Behavioral Remodelling and Use of ICT Tools for classroom delivery of Teachers	PI & Co-PI, Fr. Vintu Augustine(Principal)	SkillGym Pvt. Ltd.	21-01-19	27-01-19	23	S.F.S. Dhemaji
39.	Use of ICT Tools for Classroom Tecahing	PI & Co-PI, Dr.Sastri Ram Kachari	Mantra Associates	21-01-19	27-01-19	50	Sipajhar College, Sipajhar
40.	Data Science using Python Programming	PI & Co-PI, Dr. L Rajesh	PROBYTO	28-01-19	01-02-19	32	Sri Sankara Arts and Science College, Kanchipuram
41.	VLSI Design at Deep Submicron Node	PI & Co-PI, Dr. P. Saravanan	Expert arranged by E&ICT Academy	04-02-19	08-02-19	35	PSG College of Technology, Coimbatore
42.	Behavioral Remodeling	PI & Co-PI, Ms. Nandita	Mantra Associates	04-02-19	09-02-19	43	Pragjyotish College,

	and Use of ICT Tools for Classroom Delivery of Teachers	Rajbangshi					Guwahati
43.	VLSI Design at Deep Submicron Node	PI & Co-PI, Prof.Manisha Ingale, Prof. Rajkumar D Komati	Expert arranged by E&ICT Academy	18-02-19	22-02-19	30	MIT-World Peace University, Pune
44.	Behavioral Remodeling and Use of ICT Tools for Classroom Delivery of Teachers	PI & Co-PI, Dr Jyoti Koujalagi	Techvictus	19-02-19	23-02-19	40	Dr Ambedkar Institute Technology, Bengaluru
45.	Use of ICT Tools for Classroom Teaching	PI & Co-PI, Ms. Femina Brahma	Mantra Associates	21-02-19	27-02-19	43	Science College, Kokrajhar
46.	Use of ICT Tools for Classroom Teaching	PI & Co-PI, Dr. Pranab Jyoti Deka	Techvictus	25-02-19	02-03-19	33	Kumar Bhaskar Varma Sanskrit and Ancient Studies University, Nalbari
47.	Use of ICT Tools for Classroom Teaching	PI & Co-PI, Mr. Abul Faiz	Mantra Associates	04-03-19	09-03-19	34	Barama College, Barama
48.	VLSI Design Flow Using Cadence Suite	PI & Co-PI, Dr. Ashish Ranjan	Experts arranged by Academy	25-03-19	29-03-19	42	NIT Manipur
49.	Moodle: Open Source Learning Management System	PI & Co-PI, Dr. Sushmita Sen Gupta	Techvictus	23-03-19	27-03-19	40	BN College, Dhubri
50.	Use of ICT Tools For	PI & Co-PI, Dr. Dhiresh	Mantra Associates	23-03-19	29-03-19	47	BP Chaliha College,

	Classroom Teaching	Chakraborty					Nagarbera
51.	Behavioral Remodeling and Research Methodology	PI & Co-PI, Dr. Bijoylaxmi Sarmah, Dr. Joyatri Bora	Experts arranged by Academy	01-04-19	05-04-19	30	NERIST, Arunachal Pradesh
52.	Behavioral Remodeling and Use of ICT Tools for Classroom Delivery of Teachers	PI & Co-PI, Dr. Surendra Nath Borah	Mantra Associates	22-04-19	27-04-19	42	Dergaon Kamal Dowerah College
53.	Use of ICT Tools for Classroom Teaching	PI & Co-PI, Dr. Partha Pratim Saikia, Mr. Udoy Narayan Gogoi	Mantra Associates	22-04-19	27-04-19	60	N N Saikia College, Titabar
54.	Machine Learning Algorithms and Applications with Python	PI & Co-PI, Dr. K. R. Manjula	Probyto	26-04-19	02-05-19	33	SASTRA Deemed University
55.	Use of ICT Tools for Classroom Teaching	PI & Co-PI, Dr. Kishor Shah	Mantra Associates	29-04-19	04-05-19	43	ADP College, Nagaon
56.	Behavioral Remodeling and Use of ICT Tools for Classroom Delivery of Teachers	PI & Co-PI, Dr. Dreamse Das and Mrs. Suprity Shyam	SkillGym	29-04-19	05-05-19	55	Tinsukia Womens' College
57.	Artificial Intelligence using Python Programming	PI and Co-PIs, Mr.Veera RaghavaRao Atukuri (KIT's Guntur)	Digital Shark Technology	25-05-2020	31-05-2020	20	KIT's Guntur
58.	Imparting Online Teaching-Learning Methodology	PI and Co-PIs, Dr. Lalit Ch. Rabha Dudhnoi College	Skill Gym	26-05-2020	01-06-2020	26	Dudhnoi College

	during COVID-19 Pandemic						
59.	E-Learning Platform	PI and Co-PIs, Dr. Diganta Choudhury B. Borooah College	Mantra Associates	08-06-2020	15-06-2020	26	B. Borooah College
60.	Mentoring Pedagogy and Teaching for Higher Education	PI and Co-PIs, Dr. Parikshit Gogoi Nowgong College	Expert Organised by EICT Academy	08-06-2020	15-06-2020	26	Nowgong College
61.	Imparting Online Teaching-Learning Methodology During COVID-19 Pandemic	PI and Co-PIs, Dr. Bidyut Kalita Dudhnoi College	Skill Gym	22-06-2020	29-06-2020	27	Dudhnoi College
62.	Machine Learning and its Applications for Electrical Systems	PI and Co-PIs, Mr. Amitesh Prakash BCE	Techvictus	22-06-2020	29-06-2020	25	Bhagalpur College of Engineering
63.	Mentoring Pedagogy and Teaching for Higher Education	PI and Co-PIs, Prof. Kingshuk Majumdar BC Roy College	Expert organised by EICT Academy	29-06-2020	06-07-2020	30	BC Roy College
64.	E-Learning Platform	PI and Co-PIs, Mr. Biju Kr. Sonowal LTK College	Mantra Associates	06-07-2020	13-07-2020	35	LTK College
65.	Mentoring Pedagogy and Teaching for Higher Education	PI and Co-PIs, Dr. Arup Sarkar Bijni College	Expert organised by EICT Academy	06-07-2020	13-07-2020	37	Bijni College
66.	E-Learning Platform	PI and Co-PIs, Dr. Ridip Dev Choudhury GUIDOL	Mantra Associates	20-07-2020	27-07-2020	40	GUIDOL

67.	Mentoring Pedagogy & Teaching for Higher Education	PI and Co-PIs, Mr. Sourabh Jyoti Sarmah DK College	Expert organised by EICT Academy	20-07-2020	27-07-2020	45	DK College
68.	Mentoring Pedagogy & Teaching for Higher Education	PI and Co-PIs, Dr. Asha Madhavi Pagadala Bapatla Engineering College	Expert organised by EICT Academy	03-08-2020	10-08-2020	31	Bapatla Engineering College
69.	E-Learning Platform in Covid-19 Pandemic	PI and Co-PIs, Dr. Pratyush Purkayastha M C College, Barpeta	Mantra Associates	03-08-2020	10-08-2020	40	M C College, Barpeta
70.	Mentoring Pedagogy and Teaching for Higher Education	PI and Co-PIs, Dr. Pranjit Saikia Doom Dooma College	Expert Organised by E&ICT	10-08-2020	17-08-2020	38	Doom Dooma College
71.	E-Learning Platform	PI and Co-PIs, Dr. Sujata Sen Lumding College	Mantra Associates	17-08-2020	24-08-2020	43	Lumding College
72.	Imparting Online Teaching-Learning Methodology during COVID-19 Pandemic	PI and Co-PIs, Dr. Rabinjyoti Khataniar B H Howly	Skill Gym	17-08-2020	24-08-2020	36	B H Howly
73.	E-Learning Platform	PI and Co-PIs, Dr. Mousumi Borah Arya Vidyapith College	Mantra Associates	31-08-2020	07-09-2020	39	Arya Vidyapith College
74.	E-Learning Platform	PI and Co-PIs, Dr. Kamal Jyoti Nath Barnagar College	Mantra Associates	07-09-2020	14-09-2020	30	Barnagar College

75.	Imparting online Teaching - Learning Methodology during COVID 19 Pandemic	PI and Co-PIs, Dr. Yangneshwar Deb S. S. College, Hailakandi	SkillGym	07-09-2020	14-09-2020	27	S. S. College, Hailakandi
76.	Mentoring Pedagogy & Application of ICT tools for Online Classroom Delivery of Teachers	PI and Co-PIs, Mr. Jayanta Kalita Mazbat College	SkillGym and Expert from EICT Academy	14-09-2020	21-09-2020	38	Mazbat College
77.	Mentoring Pedagogy & Application of ICT tools for Online Classroom Delivery of Teachers	PI and Co-PIs, Mr. Bhudev Das	SkillGym	21-09-2020	28-09-2020	19	SITM and Paschim Guwahati Mahavidyalaya
78.	Machine Learning and Artificial Intelligence	PI and Co-PIs, Dr. A.K. Khureshi	Digital Shark Technologies	12-10-2020	19-10-2020	38	MMANTC, Maharashtra
79.	Mentoring Pedagogy, Teaching and Application of ICT tool for Online Classroom Delivery for Teachers	PI and Co-PIs, Dr. Aparajita Baruah (GU)	SkillGym and Expert from EICT Academy	12-10-2020	19-10-2020	38	Department of Law, Gauhati University
80.	Mentoring Pedagogy & Application of ICT Tools for Online Delivery of Teachers	PI and Co-PIs, Dr. Swapna Manibdranath Deka, Dispur Law College Mr. Nakibur Rahman, Hatichong College	SkillGym and Expert from EICT Academy	27-10-2020	03-11-2020	36	Dispur Law College and Hatichong College

81.	Artificial Intelligence and Deep Learning	PI and Co-PIs, Dr. Hema Kale and Dr. M. Shriraghavan	Digital Shark Technologies	27-10-2020	03-11-2020	26	St. Vincent Pallotti College of Engineering & Technology, Nagpur
82.	Data Science using Python Programming	PI and Co-PIs, Dr. Hema Kale and Dr. Fasel Qadir	Probyto	02-11-2020	09-11-2020	23	University of Kashmir
83.	Mentoring Pedagogy & Application of ICT tools for Online Classroom Delivery of Teachers	PI and Co-PIs, Dr. Hema Kale and Dr. Himanta Borgohain and Mr. Rupam Hazarika	Skill Gym	23-11-2020	28-11-2020	33	Joint association with RGB College, Guwahati and Amguri College, Amguri
84.	Research Methodology	PI and Co-PIs, Mr. Rajib Mahanta	Mantra Associates	23-11-2020	28-11-2020	30	Damdama College
85.	Mentoring Pedagogy, Teaching and Application of ICT tool for Online Classroom Delivery for Teachers	PI and Co-PIs, Dr. Sushmita Sen Gupta (BN College)	Mantra Associates and Experts organised by E&ICT Academy	07-12-2020	12-12-2020	34	BN College, Dhubri
86.	Mentoring Pedagogy & Application of ICT Tools for Online Classroom Delivery of Teachers	PI and Co-PIs, Dr. Kalpana Kalita Das, Birjhora Kanya Mahavidyalaya, Bongaigaon and Dr. Bihung Brahma, CIT Kokrajhar	Mantra Associates and Experts organised by E&ICT Academy	14-12-2020	19-12-2020	38	Joint association with Birjhora Kanya Mahavidyalaya & CIT Kokrajhar
87.	Mentoring Pedagogy and Research Methodology for Teaching	PI and Co-PIs, Dr. Rutwik Gandhi (BSSS) Mr. Nitin Jain (BSSS)	Expert Organised by E&ICT and Mantra Associates	28-12-2020	04-01-2021	82	The Bhopal School of Social Sciences, Bhopal

88.	Machine Learning	PI and Co-PIs, Prof. S Jyothi (Sri Padmavti Mahila Visvavidyalayam)	Digital Shark Technology	04-01-2021	09-01-2021	32	Sri Padmavti Mahila Visvavidyalayam, Andhra Pradesh
89.	Intellectual Property Rights	PI and Co-PIs, Ms. Suprity Shyam Ms. Bhagyalakhi Gogoi (Tinsukia Women College)	Techvictus Pvt. Ltd.	04-01-2021	09-01-2021	24	Tinsukia Women College
90.	Imparting Online Teaching-Learning Methodology	PI and Co-PIs, Dr. Samir Sarkar Gauhati University	Skill Gym	27-01-2021	03-02-2021	26	Gauhati University
91.	Deep Learning using Python Programmming	PI and Co-PIs, Dr. K. R. Manjula SASTRA Deemed University	Digital Shark Technology	08-02-2021	13-02-2021	32	SASTRA Deemed University
92.	Intellectual Property Rights	PI and Co-PIs, Dr. Jayshree Sarmah Rangia College	Tech Victus Pvt. Ltd.	08-02-2021	13-02-2021	22	Rangia College
93.	Mentoring Pedagogy and Teaching for Higher Education	PI and Co-PIs, Dr. Nabanita Sarmah Ms. Antareepa Bora BN College		25-02-2021	03-03-2021	19	Biswanath College
94.	Mentoring Pedagogy and Research Methadology for Teaching	PI and Co-PIs, Ms. Indira Gogoi Furkating College	Mantra Associates	08-03-2021	13-03-2021	32	Furkating College
95.	E-Learning Platform	PI and Co-PIs, Dr. Karabi Goswami	Mantra Associates	05-04-2021	10-04-2021	31	Raha College

		Raha College					
96.	Intellectual Property Rights	PI and Co-PIs, Dr. Manab Deka Arya Vidyapeeth College	Techvictus Pvt. Ltd.	21-04-2021	27-04-2021	58	Arya Vidyapeeth College
97.	Mentoring Pedagogy and Teaching for Higher Education	PI and Co-PIs, Dr. Babita Das Pub-Kamrup College		21-04-2021	27-04-2021	40	Pub-Kamrup College
98.	Mentoring Pedagogy and Teaching for Higher Education	PI and Co-PIs, Dr. Pabitra Bharali Digboi College		24-05-2021	29-05-2021	49	Digboi College
99.	E-Learning Platform	PI and Co-PIs, Dr. Manab Deka Kamarbandha College	Mantra Associates	24-05-2021	29-05-2021	49	Kamarbandha College
100.	E-Learning Platform	PI and Co-PIs, Ms. Munmoni Saikia Dr. Rana Bora Borholla College	Mantra Associates	31-05-2021	05-06-2021	52	Borholla College
101.	Mentoring Pedagogy and Teaching for Higher Education	PI and Co-PIs, Dr. Unmona Borgohain Saikia Asian Institute of Nursing Education		14-06-2021	19-06-2021	40	Asian Institute of Nursing Education
102.	Mentoring Pedagogy and Teaching for Higher Education	PI and Co-PIs, Dr. Sudev Chandra Basumatary Dr. Jhanin Mushahary Bodoland Univeristy		21-06-2021	27-06-2021	41	Bodoland Univeristy
103.	Intellectual Property	PI and Co-PIs, Dr. Ratan Deka		21-06-	27-06-2021	35	Nalbari College

	Rights	Nalbari College		2021			
104.	Mentoring Pedagogy and Teaching for Higher Education	PI and Co-PIs, Dr. Niraj Barua Dr. Rupa B. Borooah College		28-06-2021	03-07-2021	43	B. Borooah College
105.	Challenges of Higher Education in N.E. India	PI and Co-PIs, Dr. Satyajit Das Lumding College	SkillGym	05-07-2021	10-07-2021	73	Lumding College
106.	Research Methodology	PI and Co-PIs, Mr. Jintu Saikia Ms. Bonoshree Boruah Ms. Sikha Dutta Mr. Ajit Borah Bir Lachit Phukun College	Techvictus Pvt. Ltd.	19-07-2021	24-07-2021	50	Bir Lachit Phukun College
107.	Mentoring Pedagogy and Teaching for Higher Education	PI and Co-PIs, Miss Livi Kethurah(St. Joseph University) Dr. Saurav Sengupta(Damdama College)		19-07-2021	24-07-2021	58	Joint Association with St. Joseph University and Damdama College
108.	Intellectual Property Rights	PI and Co-PIs, Mr. Habib Fazlul Basid Mr. Jaynal Abdin Sapatgram College	Techvictus Pvt. Ltd.	26-07-2021	31-07-2021	30	Sapatgram College
109.	Mentoring Pedagogy and Online Teaching in Higher Education	PI and Co-PIs, Dr. Ajit Debnath MSSV University		26-07-2021	31-07-2021	57	MSSV University
110.	Machine Learning for Internet of Things	PI and Co-PIs, Dr Manikonda Srinivasa Sesha Sai Dr. Akula.Sunee	Uniconverge	26-07-2021	31-07-2021	199	KITs Guntur

		KITs Guntur					
111.	Mentoring Pedagogy and Online Teaching in Higher Education	PI and Co-PIs, Dr. Dulal Chandra Boruah Goalpara College		09-08-2021	14-08-2021	33	Goalpara College
112.	Mentoring Pedagogy and Online Teaching in Higher Education	PI and Co-PIs, Tinsukia College		16-08-2021	21-08-2021	40	Tinsukia College
113.	Intellectual Property Rights	PI and Co-PIs, Dr. Nilam Jyoti BN College, Dhubri	Techvictus Pvt. Ltd.	23-08-2021	28-08-2021	278	BN College, Dhubri
114.	Classroom Management Skills and Online Delivery Techniques	PI and Co-PIs, Dr. Bandana Nabis Das Handique College, Guwahati	Skill Gym and and Experts organised by E&ICT Academy	20-09-2021	25-09-2021	22	Handique College, Guwahati
115.	Challenges of Higher Education in 21st Century	PI and Co-PIs, Dr. Mallika Basumotary Bengtol College, Bengtol	Skill Gym	20-09-2021	25-09-2021	41	Bengtol College, Bengtol
116.	Challenges of Higher Education in 21st century	PI and Co-PIs, Dr. Minakshi Das Bandana Gogoi North Kamrup College, Bajali	Skill Gym	27-09-2021	02-10-2021	18	North Kamrup College, Bajali
117.	Classroom Management Skills & Online Delivery Techniques	PI and Co-PIs, Pranjal Deka Dr. Arfan Hussain Government Model College, Kaziranga	Skill Gym and and Experts organised by E&ICT Academy	04-10-2021	09-10-2021	45	Governmen t Model College, Kaziranga
118.	Intellectual Property Rights	PI and Co-PIs, Dr. Santanu Konwar	Techvictus	18-10-2021	23-10-2021	40	Abhayapuri College, Bongaigao

		Abhayapuri College, Bongaigaon					n
119.	Artificial Intelligence and Machine Learning	PI and Co-PIs, Dr. Janmenjoy Nayak Dr. U. D. Prasan AITAM, Tekkali, AP	Imarticus Learning	25-10-2021	30-10-2021	48	AITAM, Tekkali, AP
120.	Intellectual Property Rights	PI and Co-PIs, Dr. Mahesh G Saralaya Dr. Anil.B. Shinde Annasaheb Dange College of B Pharmacy, Ashta-Sangli and Annasaheb Dange College of Engineering and Technology, Ashta-Sangli	Techvictus	25-10-2021	30-10-2021	56	Annasaheb Dange College of B Pharmacy, Ashta-Sangli and Annasaheb Dange College of Engineering and Technology, Ashta-Sangli
121.	Internet of Things	PI and Co-PIs, Dr. M. Appa Rao Guntur Engineering College	Uniconverge Technologies Pvt. Ltd	22-11-2021	27-11-2021	39	Guntur Engineering College
122.	Internet of Things	PI and Co-PIs, Dr. Hema Kale Mr. Amol Pardhi St. Vincent Pallotti College of Engineering	UniConverge Technologies Private Limited	06-12-2021	11-12-2021	111	St. Vincent Pallotti College of Engineering
123.	Classroom Management Skills & Online Delivery Techniques	PI and Co-PIs, Md. Mayemun Ali Debendra Basumatary Bhum Muchahary Basugaon	Expert Organised by E&ICT	13-12-2021	18-12-2021	33	Basugaon College, Chirang

		College, Chirang					
124.	TAPAS-PRM: A course on purposeful research methodology	PI and Co-PIs, Research for Resurgence Foundation, Nagpur		16-12-2021	20-12-2021	124	Research for Resurgence Foundation, Nagpur
125.	Research Methodology & Classroom Management Skills	PI and Co-PIs, Dr. Dhanju Mani Pathak Nalbari College, Nalbari	Mantra Associates	20-12-2021	26-12-2021	183	Internal Quality Assurance Cell (IQAC), Nalbari College, Nalbari
126.	Use of ICT in Research and Writing	PI and Co-PIs, Dr. Bidyut Kalita Mr. Dilip Hazarika Ms. Bondita Borbora Dudhnoi College	Mantra Associates	03-01-2022	08-01-2022	218	Dudhnoi College
127.	Research Methodology and Online Teaching	PI and Co-PIs, Dr. Joyatri Bora Dr. Pranab Kishore Dutta Dr. Ashok Kumar Ray Dr. Madhusudhan Mishra NERIST	Mantra Associates	17-01-2022	22-01-2022	256	NERIST
128.	Intellectual Property Rights	PI and Co-PIs, Dr. Chandan Debnath Ambedkar University	Techvictus	17-01-2022	22-01-2022	45	Ambedkar University
129.	Internet of Things	PI and Co-PIs, Dr. K. Yogeswara Rao Prof. R. Sireesha GITAM	IoT Academy	24-01-2022	30-01-2022	353	GITAM Institute of Technology

		Institute of Technology					

- List of Selected Joint Faculty Development Programmes conducted through NKN Mode at EICT Academy, IIT Guwahati (List is yet to be updated)

Sl. No.	Name of the Programme	Local Co-ordinator(s) Name	Start Date	End Date	Participation Count
1.	Summer FDP on VLSI Design and Verification	Dr. Gaurav Trivedi	26-05-2018	30-05-2018	41
2.	Winter FDP on DSP and Sensors	Dr. Gaurav Trivedi	10-12-2018	14-12-2018	100
3.	VLSI Chip Design Hands on using open source EDA	Dr. Gaurav Trivedi	08-07-2019	12-07-2019	160
4.	VLSI Chip Design Hands on using open source EDA	Dr. Gaurav Trivedi	16-12-2019	20-12-2019	156
5.	ICT Tools and Techniques for Teaching, Learning and Institutes	Prof. Ratnajit Bhattacharjee and Dr. Gaurav Trivedi	13-01-2020	17-01-2020	96

- List of Selected Workshops Conducted through EICT Academy, IIT Guwahati

Sl. No.	Name of the Workshop	Co-ordinator(s) Name	Start Date	End Date	Venue	Participation Count
1.	Virtual Reality using Unity 3D Modelling	PI & Co-PI	04-06-18	16-06-18	IIT Guwahati	30
2.	Data Analytics using R Programming	PI & Co-PI, Dr. Pratyusha Sharma and Dr. Chitrapriya	30-08-18	01-09-18	Sikkim and Manipal University	47
3.	FPGA Design	PI & Co-PI, Dr. Gaurav Trivedi	10-11-18	10-11-18	IIT Guwahati	80
4.	Block Chain Technology	PI & Co-PI, Dr.Partha Pratim	28-03-19	30-03-19	Sikkim University	39

5.	Information and Communication Technology	PI & Co-PI, Dr. Tapan Talukdar	21-04-19	21-04-19	KBVSAS University, Nalbari	37

- List of Selected Different Training Conducted through EICT Academy, IIT Guwahati

Sl. No.	**Name of the Workshop**	**Co-ordinator(s) Name**	**Start Date**	**End Date**	**Venue**	**Participation Count**
1.	Patent Research	PI & Co-PI	21-06-2018	23-06-2018	Jain University	25
2.	IoT for emerging Engineering Applications	PI & Co-PI	16-07-2018	20-07-2018	Gauhati University	31
3.	Winter Training Programme on "Python Programming"	PI & Co-PI	02-01-2019	07-01-2019	E&ICT Academy IIT Guwahati	06
4.	RISC-V Processor Design	Co-PI	July 2020	August 2020	ASTU, Guwahati	320

(n) Sponsored/Consultancy Research Projects:

Sl. No.	**Title**	**Sponsoring Agency**	**Period**	**Amount *(Rupees)***
1	Reducing Cache Access Time in Tiled Chip Multiprocessors	Department of Information Technology (DIT)	03 Years (Completed)	79 Lakhs ($120K)
2	Point Relaxation and LUT Based Efficient Circuit Simulator for Novel Devices	IIT Guwahati (Start Up Grant project)	02 Years (Completed)	05 ($10K)
3	ARM Embedded System Design Lab	ARM Embedded Technologies Pvt Ltd, India	01 Year (Completed)	ARM donated resources for the research in embedded system design
4	High Performance Computing using GPU	Nvidia Graphics Pvt Ltd, India	04 Years (Completed)	$2500 along with the resources of worth $10000
5	FPGA Based Solution for Algorithmic Trading Platforms	Pace Stock Broking Services Pvt. Ltd.,	09 Months (Completed)	17 Lakhs ($25K)

		A1/291, Safdarjung Enclave, New Delhi-110029		
6	Electronics and ICT Academy	DeitY, MeitY, India	7 Years (Ongoing)	25 Crores ($4 Million)
7	Development of ESD I/O Pads for CIS/CCD Image Sensor for 0.18um SCL Foundry	ISRO (RESPOND)	2 Years (Completed)	20 Lakhs ($30K)
8	An Energy Efficient IOT Processor built using an Optimized Near-Threshold Voltage Standard Cell Library	IMPRINT (jointly with IIT Roorkee)	3 Years (Completed)	50 Lakhs
9	Development and Efficient Characterization of Floating Body (FB) and Dynamic Threshold (DT) CMOS Partially Depleted Silicon-On-Insulator (PDSOI) Standard Cell Libraries	DST SERB (jointly with IIT Roorkee)	3 Years (Completed)	50 Lakhs
10	Intel FAME Labs	Intel Technologies	4 Years (Ongoing)	Rs. 1.4 Crores
11	Smart Contactless Technology Development for Smart Fencing	DST (Indo-Czech joint collaboration) (jointly with IIT Roorkee)	3 Years (Ongoing)	Rs. 54,88,335
12	AI enabled advanced aquaponics ecosystem for the self-reliance of SC community in central and lower Assam	Science for Equity Empowerment and Development Division (SEED), DST	3 Years (Ongoing)	Rs. 2,68,47,040
13	Centre for depression diagnosis and medication adherence	Joint programme of cooperation in science and technology, DST and South Korea	3 Years (Ongoing)	Rs. 1,37,07,648
14	Technical Consultant for RVM under Swachh Bharat Mission	United Nations Development Programme	1 Year (Completed)	Rs. 5,00,000
15	Empowering Girls to Reduce the Gender Gap in IT and ITES Sectors in South Asia Region: Training and E-Content Development Programme (Jointly with IIITDM Jabalpur)	Asi@Connect	2 Year (Completed)	Euro 150,000
16	Development of Human	National Skill	3 Years	54 Crores

	Resources for Enhancement of Entrepreneurship and Technology Innovation (DHREETI)	Development, Corporation, Ministry of Skills and Entrepreneurship (MSDE)	(Ongoing)	
17	Design and Development of AI/ML Co-Processor and Post Quantum Cryptography Co-Processor (An initiative towards Electronics System Design and Manufacturing in North-East Region)	MeitY	3 Years (Ongoing)	20 Crores
18	SAPTARISHI: A skill Development Programme for Trainers	National Skill Development, Corporation, Ministry of Skills and Entrepreneurship (MSDE)	3 Years (Ongoing)	14 Crores

(o) Academic Outreach Activities

- More than **100** keynote/invited/experts talks/lectures delivered since 2011.
- **Technical Programme Chair** and **Advisory Committee Member** of ETTIS 2022 at Noida, NCR Delhi
- **Advisory Committee Member** of VDAT 2021 at SVNIT Surat
- **Technical Programme Chair** and **Advisory Committee Member** of ETTIS 2021 at Noida, NCR Delhi
- **General Chair** and **Sponsorship Chair** at 34th International Conference on VLSI Design and 20th International Conference on Embedded Systems (VLSID), January, 2021
- **Registration Chair** at 33rd International Conference on VLSI Design and 19th International Conference on Embedded Systems (VLSID), Bangalore, January 2020
- **Publicity Chair** at 32nd International Conference on VLSI Design and 2019 and 18th International Conference on Embedded Systems (VLSID), New Delhi, January 2019
- **Keynote speaker** at SSIC 2019, Manipal University, Jaipur, Rajasthan, India
- **Session Chair** at IEEE SMC 2019
- **Session Chair** at MAREW and COMIT 2019
- **Fellowship Chair** at IEEE VLSI Design and Test conference 2019, IIT Indore

- **Organization Chair** at Bharatiya Education Science and Technology (BEST) (jointly with Bharatiya Shikshan Mandal and Research for Resurgence Foundation), March 2018
- **Sponsorship Chair** at VLSI Design and Test (VDAT) 2017, IIT Roorkee, June 2017
- **Publication Chair** at International Conference on Innovations in Electronics, Signal Processing and Communication (IESC 2017), April 2017
- **Sponsorship Chair** at 1st International Conference on Accessibility to Digital World (ICADW 2016), Assam Engineering College Guwahati, December 2016
- **Convener, Organizing Chair and Sponsorship Chair** at VLSI Design and Test (VDAT) 2016, IIT Guwahati, May 2016
- **Finance Chair** at AEMC 2015, IIT Guwahati, December 2015
- **Session chair** at MAREW 2015
- **Sponsorship Chair** at CCP 2015, IIT Guwahati, December 2015
- ANSYS Multiphysics Solutions, in association with Entuple and Ansys India Pvt. Ltd., November 2015 **(Convener)**
- Code Modernization, in association with Wipro Ltd., August 2015 **(Convener)**
- A half day seminar on Advanced MATLAB Concepts jointly with MATHWORKS, July 2015 **(Convener)**
- KIC-TEQIP sponsored 03-day course on "Recent Trends in Electronics and Computation", March 2015 **(Coordinator)**
- Two day workshop on ARM processors, "Embedded Systems Using ARM Processors", conducted jointly with ARM Embedded System India Pvt. Ltd. and IEEE Student Branch IIT Guwahati, January 2015 **(Convener)**
- **Session chair** at international conferences ICIIS 2014
- Three-day workshop on GPU programming, "Workshop on Nvidia GPU Programming and Applications (GPA 2014)", conducted jointly with Indian Institute of Technology Bombay and CDAC Pune, September 2014. (This workshop was sponsored by HP, EMC, DELL, ANSYS, MATHWORKS and MELLANOX.) **(Overall Coordinator and Convener)**

- Two day workshop on FPGA based designing, "Workshop on Xilinx Design Flow", conducted jointly with CoreEl Technologies Pvt. Ltd., November 2013 **(Convener)**
- One day workshop on Intel Xeon Phi technology, "Tech 'Phi' Drive", conducted jointly with Intel Technologies India Pvt. Ltd. and Wipro Ltd., August 2013 **(Convener)**
- Intel Technologies Pvt. Ltd. sponsored course on Parallel Computing **(Joint Coordinator)**

(p) Other Professional Activities:

- Member of IEEE
- Reviewer of research publications for IEEE, ACM, Springer, Elsevier journals and conferences
- Core group member of **Centre for Advanced Computing,** and **High Performance Computing and FPGA** Lab at IIT Guwahati
- Core group member of **AUSHADHI**, an Open Source Drug Discovery Platform, at IIT Guwahati
- Conducted a course (June 2005) on Computer Architecture at C-DAC's Mumbai center for its DVLSI program.
- Participated as a speaker at various workshops (viz. Cadence Design System India Pvt Ltd (November 2001), at Fr. Conceicao Rodrigues College of Engineering, Father Agnel Ashram, Mumbai (Jan 2003) and at NCST, Mumbai (June 2005)).
- Participated at Academic Industry Meet conferences AIM 2002, AIM 2003, and AIM 2004 held at IIT Bombay.
- Reviewer of research publications for IEEE/ACM VLSI Design conference.
- Participated as a member of organizing committee at VSDT 2000, IEEE/ACM VLSI Design Conference 2004 and LOGIC 2005.
- Worked as a teaching assistant (TA) to various undergraduate and postgraduate courses on VLSI CAD, Microprocessor and Computer Architecture for several years.
- Involved in setting up of VLSI Lab housing servers and workstations for VLSI Design and VLSI CAD tool development at IIT Bombay.