Detailed CV

Name : Dr. Susanta Kumar Tripathy
Designation : Associate Professor
Date of Birth : May 28, 1981
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Specializations:

Renewable energy, Nanoelectronics & Nanotechnology, Opto-electronic Materials and VLSI Design

Research Areas of Interest:

- Synthesis and Characterization of Perovskite Materials
- Band structure calculations for semiconductor compounds and its alloys using Density Functional Theory (DFT)
- Design and fabrication of low-cost solar cell modules using earth abundant materials

Academic Background:

Course	Year	Stream	College/University	Percentage/CPI & Div.
B. Tech	2003	Electronics & Communication	Biju Patnailk University of Technology, Rourkela	74.4 (1st Division)
M. Tech	2009	Electronics & Communication	Motilal Nehru National Institute of Technology (MNNIT), Allahabad	8.11 (1st Division)
Ph. D	2014	Electronics Engineering	IIT (Indian School of Mines), Dhanbad	NA

Ph. D. Thesis : Electronic and Second Order Nonlinear Properties of Opto-electronic Materials.

M. Tech. Thesis: Implementation of CORDIC Algorithm on FPGA using VHDL.

Professional Recognition/ Award/ Prize/ Certificate, Fellowship received:

1. Qualified GATE in Electronics and Communication Engineering.
2. Received BEST paper Award in ICCC Conference at Bhubaneswar, 2013.
3. Received INSA visiting Scientist Fellowship, 2017.

4. Received Slovak National Scholarship, 2019.
5. Life Member of ISTE. (LM 131676)
6. Member of Institution of Engineers (India). (M-1706130)
7. Fellow IETE (F-502129)
8. Senior Member IEEE (92462633)
9. Life Member Odisha Bigyan Academy
10. IEEE Nanotechnology Technology Council (NTC), Student Branch Chapter, Treasure
11. Received Travel Grant from IEEE 5NANO Conference 2022, Kottayam, Kerala
12. Received INSA visiting Scientist Fellowship, 2022.

Administrative Responsibilities:

1. Associate Dean (Research & Consultancy)
2. Assoc. Warden of Married Scholar Hostel
3. Departmental QIP Coordinator
4. Departmental Purchase Committee Secretary
5. External Member DPPC, CSE Dept.
6. Advance Electronic Lab In charge
7. Member DUPC
8. External Member DPPC, Physics Dept.
9. DMPC Secretary

Professional/Research/Teaching Experience:

Sl. No.	Position Held	Name of the Institute	From	To	Pay Scale (In Rupees)	Duration in Year (Approx.)
1.	Associate Professor	National Institute of Technology, Silchar	06th July, 2022	Till Date	Level 13A2	Continuing
2.	Assistant Professor-I	National Institute of Technology, Silchar	1st June, 2018	05th July, 2022	Level 12	4 yrs. 1 Month
3.	Assistant Professor-II	National Institute of Technology, Silchar	12th Nov, 2015	31st May, 2018	15600+6000	2 yrs. 6 Months
4.	Assistant Professor	Sant Longowal Institute of Engineering Technology (SLIET), Longowal	23rd Jan, 2014	06th Nov, 2015	15600+6000	1 yr. 10 Months
5.	Research Scholar	IIT (ISM), Dhanbad	11th July 2011	8th Aug 2014	28000.00 (Stipend)	3 yrs. 1 Month
6.	Assistant Professor	M.I.T.S, Rayagada	16th July, 2010	10th July, 2011	15600+6000	1 yr.
7.	Assistant Professor	I.A.C.R, Rayagada	19th May, 2009	15th July, 2010	15600+6000	1 yr. 2 Months
8.	Lecturer	I.A.C.R, Rayagada	10th Sep, 2003	15th July, 2007	8000	3 yrs. 10 Months

Subjects Handled:

(a) U.G. Level:
Basic Electronics, Analog Electronics, Digital Electronics, Signal & Systems, Control System Engineering, Digital Signal Processing

(b) P.G. Level
VLSI Design, Hardware Description Language, MEMS, VLSI Testing and Verifications

Research Publications

A. Patent

1. A. Srivastava, S. K. Tripathy, T. R. Lenka "A Method For Developing Thin Film Solar Cell with Alternative Absorber Layer" STATUS: AUSTRALIAN PATENT NO. 2021106184, YEAR: 20 AUG 2021.
2. Samadrita Das, T. R. Lenka, Rabin Paul, G. Purnachandra Rao, F. A. Talukdar, S. K. Tripathy "Design and Analysis of Novel n-doped a-Si/CZTSe Ultra-Thin-Film Solar Cell for Energy Harvesting" STATUS: GERMAN PATENT NO. H01L31/0445, YEAR: 02 JUNE 2022.

B. Book Chapters

1. K Harikrishna, S. K. Tripathy, "Compressors Using Modified Sorting and Parallel Counting" Communications in Computer and Information Science vol 2128. Springer, June 2024 https://doi.org/10.1007/978-3-031-62217-5_23.
2. Niteshkumar Agrawal, Moutusi De, Shreedevi Avinash Kulkarni, Lokendra Singh, **S. K. Tripathy,** "Nanotechnology and Its Applications in Biomedical Sciences" Cutting-Edge Applications of Nanomaterials in Biomedical Sciences. Nov. 2023 DOI: 10.4018/979-8-3693-0448-8.ch003
3. **S. K. Tripathy**, J. K. Singh, G. M. Prasad, "Bilayer Graphene Nanoribbon Transistor for Butane Gas Detection" Lecture Notes in Electrical Engineering Vol. 1046 Springer, Singapore. DOI: https:// doi.org/ 10.1007/978-981-99-2710-4. **(Scopus Indexed)**
4. A. Srivastava, T.R. Lenka, Jesuraj Anthoniappen and **S. K. Tripathy**, "Investigation on Thermodynamic Properties of Novel $Ag_2SrSn(S/Se)_4$ Quaternary Chalcogenide for Solar Cell Applications: A Density Functional Theory Study" Lecture Notes in Electrical Engineering Vol. 904 Springer, Singapore. DOI: https:// doi.org/10.1007/978-981-19-2308-1_12. **(Scopus Indexed)**
5. **S. K. Tripathy**, J. K. Singh, G. M. Prasad, F. A. Talukdar, "Estimation of Electronic and Optical Properties of Chalcopyrite Semiconductors using Machine Learning" Proceedings of 28th National Conference on Condensed Matter Physics, Vol. 269 Springer, Singapore. DOI: https://doi.org/10.1007/978-981-16-5407-7_17 **(Scopus Indexed)**
6. J. T. Mazumder, Milan Zunic, Zorica Brankovic and **S. K. Tripathy**, "Investigation of Structural and Morphological Properties of Indium Doped Titanium Di-oxide Nanoparticles Synthesized Using Sol-gel Process" Lecture Notes in Electrical Engineering Vol. 781 Springer, Singapore. DOI: https://doi.org/ 10.1007/978-981-16-3767-4 **(Scopus Indexed)**
7. A. Srivastava, T.R. lenka and **S.K. Tripathy**, "SCAPS-1D simulations for comparative study of alternative absorber materials Cu_2XSnS_4 (X= Fe, Mg, Mn, Ni, Sr) in CZTS based Solar cells" Lecture Notes in Electrical Engineering Vol. 781 Springer, Singapore. DOI: https://doi.org/ 10.1007/978-981-16-3767-4 **(Scopus Indexed)**
8. P. Sarkar, S**. K. Tripathy**, and K. L. Baishnab, "Structural and Optoelectronic Properties of Spin-Coated $CH_3NH_3PbCl_3$ Thin Film Using Non-halide Source of Lead" Lecture Notes in Electrical Engineering Vol. 686 Springer, Singapore. https://doi.org/10.1007/978-981-15-7031-5_88. **(Scopus Indexed)**
9. D. Dash, Saurabh Chaudhury, S. K. Tripathy, "A Density Functional Theory Based Study of Electronic and Optical Properties of Anatase Titanium Di-oxide", Advances in Communication, Devices and Networking, Vol. 462 (2018) 57-67 Springer – Verlag Publishers. (DOI: https://doi.org/10.1007/978-981-10-7901-6_8). **(Scopus Indexed)**

C. International Peer Reviewed Journals:

1. C. K. Pradhan, S. Mattaparthi, P. Sarkar, S. K. Tripathy, D. Das, and A. Srivastav, "First-Principles Calculation of Cs_2AgIrX_6 (X = I/Br/Cl) Double perovskite and Multiscale Modelling of $Cs_2AgIrBr_6$ Solar Cell for Space Applications." ***Advanced Theory and Simulations*** 9(6) (2026) e70450. Quartile: Q1
2. Srinivas Mattaparthi, **S. K. Tripathy**, Himanshu Karan, "Improving performance of solar cells using optimized $Cs_2AgBi_2I_9$-$Cs_3Bi_2I_9$/Rb_2AgBiI_6 double perovskite tandem structure for space applications" ***Mat. Sci. Engg. B*** 324 (2026) 118958. Quartile: Q1
3. Srinivas Mattaparthi, Ashutosh Srivastava, Ashish Kulkarni, Sanjay Mathur, **S. K. Tripathy**, and Himanshu Karan, "High Performance Rb_2AgBiI_6 Perovskite Solar Cell with Optimized Charge Transport Layers for Space Applications" ***Solar Energy Materials and Solar Cells*** 295 (2026) 113995. Quartile: Q1
4. Jay Kumar Yadav, **S. K. Tripathy,** "Mathematical modeling of surface plasmon and detection of DNA hybridization using novel SPR sensor" ***Biosensors and Bioelectronics*** 287 (2025) 117753. Quartile: Q1

5. Jay Kumar Yadav, **S. K. Tripathy**, Chittaranjan Nayak, Saeed Olyaee, Egor I. Dolzhenko, "Mathematical Modelling and Numerical Investigation of 2D Functional ZnO Photonic Sensor to Detect Urine Components" ***Plasmonics*** **20** (2025) 3681–3692. Quartile: Q3
6. Chittaranjan Nayak, J. K. Rakshit, J. K. Behera, Gopinath Palai, **S. K. Tripathy**, L. N. Kotov, Yogesh Sharma, Tanweer Beig, "Symmetrical Fibonacci polymeric photonic multilayers: Light localization and elasto-optic effect" ***Opt. Quant Electron*** 56 (2024) 1437. Quartile: Q2
7. Jay Kumar Yadav, **S. K. Tripathy**, Gaurav Kumar Bharti, Neeraj Kumar, "Numerical Investigation of Novel 2D Photonic Structure for Cancerous Cell Detection" ***Eur. Phys. J. Plus*** 139 (2024) 308 (1-12). Quartile: Q2
8. A. Srivastava, Arun Mannodi-Kanakkithodi, T. R. Lenka, G. Palai, **S. K. Tripathy**, "First Principles Investigations for Structural, Electronic, Optical and Elastic Properties of $Ag_2BeSn(S/Se)_4$ Chalcogenide in Kesterite and Stannite Phases with Theoretical SLME Calculations" ***Physica B: Condensed Matter*** 650 (2023) 414563. Quartile: Q2
9. C. S. Mishra, M. R. Nayak, **S. K. Tripathy,** R. N. Satpathy, G. Palai, "Realization of pressure sensor in ZnO semiconductor using the combination of photonic structure and FDTD method" ***Journal of Optoelectronics and Advanced Materials*** 25 (2023) 521-526. Quartile: Q4
10. C. S. Mishra, S. R. Mondal, R. Arunachalam, M. R. Nayak, **S. K. Tripathy**, G. Palai "A proposal for a Giga Pascal Pressure Sensor using one dimensional photonic waveguide at signal of 850/ 1310 /1550 nm" ***Opt Quant Electron*** 55 (2023) 33. Quartile: Q2
11. P. Sarkar, Neeraj Kumar Niranjan, A. Srivastava, **S. K. Tripathy**, K. L. Baishnab, M. C. Chinnaiah, "Comparative Study on the Role of Different Precursor Salts on Structural, Morphological, and Optoelectronic Characteristics of $CH_3NH_3PbCl_3$ Perovskite Semiconductor: An Experimental Study" ***J. Electron. Mater.*** 51 (2022) 7105–7112. Quartile: Q2
12. A. Srivastava, **S. K. Tripathy**, T. R. Lenka, Vishal Goyal, "Numerical simulations of novel quaternary chalcogenide $Ag_2MgSn(S/Se)_4$ based thin film solar cells using SCAPS 1-D" ***Solar Energy*** 239 (2022) 337-349. Quartile: Q1
13. A. Srivastava, **S. K. Tripathy**, T. R. Lenka, Pavol Hvizdos, P. S. Menon, F. Lin, A. G. Aberle, "Device Simulation of Ag_2SrSnS_4 and $Ag_2SrSnSe_4$ Based Thin-Film Solar Cells from Scratch" ***Advanced Theory and Simulations*** 2100208 (2021) 1-12. Quartile: Q1
14. P. Sarkar, **S. K. Tripathy**, K. L. Baishnab, "Polyvinylpyrrolidone capped electrospun $CH_3NH_3PbCl_3$ perovskite film as the electron transport layer in perovskite solar cell application" ***Solar Energy*** 230 (2021) 390-400. Quartile: Q1
15. J. T. Mazumder, T.R. Lenka, **S. K. Tripathy**, Per Erik Vullum, P.S. Menon, F. Lin, A.G. Aberle, "Investigation of structural, morphological, and optoelectronic properties of Ga-doped TiO_2 nanoparticles for electron transport layer in solar cell applications: an experimental and theoretical study" ***J. Phys. Chem. Solids*** 161 (2022) 110410. Quartile: Q2
16. J. Husna, P. S. Menon, P. Chelvanathan, M. A. Mohamed, **S. K. Tripathy**, T. R. Lenka, "Numerical study of semi-transparent thin film heterojunction p-Cuo/n-Zno/AZO/ITO solar cells device model using SCAPS-1D" ***Chalcogenide Letters*** 18(11) (2021) 667-679. Quartile: Q3
17. T. R. Lenka, R. Singh, **S. K. Tripathy**, V. Goyal, T. K. Nguyen, H. P. T Nguyen, "2DEG characteristics of InAlAs/InP based HEMTs by solving Schrödinger and Poisson equations followed by device characteristics" ***International Journal of Numerical Modelling Electronic Networks Devices and Fields***, e2941 (2021) 1-12. Quartile: Q2
18. A. Srivastava, **S. K. Tripathy**, T. R. Lenka, P. S. Menon, F. Lin, A. G. Aberle, "An ab initio investigation of mechanical and thermodynamic properties of $Ag_2MgSn(S/Se)_4$ in kesterite and stannite phases" ***Applied Physics A*** 127 (2021) 590. Quartile: Q2
19. K. P. Swain, S. R. Mondal, M. N. Mohanty, **S. K. Tripathy**, G. Palai, "Realization of Temperature Sensor using both two- and three-Dimensional photonic structures through machine learning technique" ***J. Comput. Electron.*** 20 (2021) 1588-1598. Quartile: Q3
20. J. T. Mazumder, T. R. Lenka, Milan Zunic, Zorica Brankovic, **S. K. Tripathy**, P. S. Menon F. Lin, A. G. Aberle, "First Principle Study on Structural and Optoelectronic Properties and Band-gap Modulation in Germanium Incorporated Tin (IV) Oxide" ***Mater. Today Commun.*** 27 (2021) 102393 (1-9). Quartile: Q2
21. A. Srivastava, P. Sarkar, **S. K. Tripathy**, T. R. Lenka, P. S. Menon, F. Lin, A. G. Aberle, "Structural, electronic and optical properties of $Ag_2MgSn(S/Se)_4$ quaternary chalcogenides as solar cell absorber layer: An Ab-initio study" ***Solar Energy*** 209 (2020) 206-213. Quartile: Q1

22. J. Husna, P. S. Menon, P. Chelvanathan, J. Sampe, N. Amin, **S. K. Tripathy**, T. R. Lenka, A. R. Md. Zain and M. A. Mohamed, "Bandgap Shifting and Crystalline Quality of RF-Sputtered Intrinsic-ZnO Nanofilm for TFSC Application" ***Int. J. Nanoelectro. and Mater.*** 13 (2020) 1-10. Quartile: Q4
23. P. Sarkar, A. Srivastava, **S. K. Tripathy**, K. L. Baishnab, T. R. Lenka, P. S. Menon, F. Lin, A. G. Aberle, "Exploring the Effect of Ga^{3+} Doping on Structural, Electronic and Optical Properties of $CH_3NH_3PbCl_3$ Perovskites: An Experimental Study" ***J. Mater. Sci.: Mat. in Electro.*** 32 (10) (2021) 12841-12855. Quartile: Q2
24. J. Mazumder, R. Mayengbam and **S. K. Tripathy,** "Theoretical investigation on structural, electronic, optical and elastic properties of TiO_2, SnO_2, ZrO_2 and HfO_2 oxides using SCAN meta-GGA functional: A DFT study" ***Mater. Chem. Phys.*** 254 (2020) 123474 (1-12). Quartile: Q1
25. R. Mayengbam, **S. K. Tripathy** and G. Palai, "Structural, electronic, optical and mechanical properties of Zn-doped $MAPbI_3$ perovskites and absorber layer efficiencies: An ab-initio investigation" ***Mater. Today Commun.*** 24 (2020) 101216 (1-12). Quartile: Q2
26. P. Sarkar, A. Srivastava, **S. K. Tripathy**, K. L. Baishnab, T. R. Lenka, P. S. Menon, F. Lin, A. G. Aberle, "Impact of Sn Doping on Methylammonium Lead Chloride Perovskite: An Experimental Study" ***J. Appl. Phys.*** 127 (2020) 125110 (1-11). Quartile: Q2
27. I.S. Amiri, Jafar Al-Zubi, **S.K.Tripathy** and G.Palai, "Realization of antireflection elements using glass-based photonic crystal structures" ***Optik*** 199 (2019) 163386 (1-6). Quartile: Q2
28. R. Mayengbam, A. Srivastava, **S. K. Tripathy** and G. Palai, "Electronic Structure and Optical Properties of Gallium-Doped Hybrid Organic-Inorganic Lead Perovskites from First-Principles Calculations and Spectroscopic Limited Maximum Efficiencies" ***J. Phys. Chem. C*** 123 (38) (2019) 23323-23333. Quartile: Q1
29. P. Sarkar, R. Mayengbam, **S. K. Tripathy,** K. L. Baishnab, "Cubic methylammonium lead chloride perovskite as a transparent conductor in solar cell applications: An experimental and theoretical study" ***Ind. J. Pure Appl. Phys.,*** 57 (2019) 891-899. Quartile: Q3
30. I.S. Amiri, S. K. Sahoo, G.Palai, **S.K. Tripathy**, "Generation of '16' type of biomedical laser using a single photonic structure: A new paradigm to operation in medical science" ***Optik*** 197 (2019) 163227. Quartile: Q2
31. I.S. Amiri, G.Palai, **S. K. Tripathy**, S. R. Nayak, "Realisation of all photonic logic gates using plasmonic-based photonic structure through bandgap analysis", ***Optik*** 194 (2019) 163123 (1-6). Quartile: Q2
32. P. Sarkar, J. Mazumder, **S. K. Tripathy**, K. L. Baishnab, G. Palai, "Structural, optoelectronic, and morphological study of indium-doped methylammonium lead chloride perovskites", ***Appl. Phys. A*** 125 (2019) 580 (1-12). Quartile: Q2
33. I.S. Amiri, G.Palai, Jafar Al-Zubi, **S.K. Tripathy**, "Controlling of optical fiber bending losses through 'WARN' parameter and machine learning direction at three communication windows", ***Optik*** 194 (2019) 163054 (1-6). Quartile: Q2
34. I.S.Amiri, P.Yupapin, Bandana Mahapatra, **S.K. Tripathy**, G.Palai, "Computation of PUG concentration in human blood using the combination of photonics and machine learning", ***Optik*** 192 (2019) 162968 (1-6). Quartile: Q2
35. I. S. Amiri, P.Yupapin, G.Palai and **S.K. Tripathy,** "A proposal to identify live cancer cell by naked eye: Realization of biomedical application using 1D photonic structure", ***Optik*** 183 (2019) 818-821. Quartile: Q2
36. D. Dash, C. K. Pandey, S. Chaudhury, and **S. K. Tripathy,** "Structure, Stability, and Electronic Properties of Thin TiO_2 Nanowires of Different Novel Shapes: An Ab- initio Study" ***J. Scientia Iranica*** 26 (3) (2019) 1951-1961. Quartile: Q2
37. G. Palai, Anand Nayyar, Arun Solanki, **S. K. Tripathy,** "Generation of Ultra Violet signal from visible light using Photonic Crystal Fiber: A realization of PCF based UV torch", ***Optik*** 180 (2019) 913-916. Quartile: Q2
38. R. Mayengbam, **S. K. Tripathy** and G. Palai, "First principle Insights of Electronic and Optical properties of Cubic Organic-Inorganic $MAGe_xPb_{(1-x)}I_3$ Perovskites for Photovoltaic applications", ***J. Phys. Chem. C,*** *122* (49) **(2018)** 28245–28255. Quartile: Q1
39. D. Dash, C. K. Pandey, S. Chaudhury, and **S. K. Tripathy,** "Structural, Electronic, and Mechanical Properties of Anatase Titanium Dioxide-An ab-initio Approach", ***Multidiscipline Modelling in Materials and Structures (MMMS),*** 15(2) (2018) 306-316.
40. D. Dash, C. K. Pandey, S. Chaudhury, and **S. K. Tripathy**, "Determination of Different Optical Properties for Cubic Titanium Di-oxide: An ab-initio Approach", ***Advances in Science and Technology Research Journal***, 12(3) (2018) 223-232. Quartile: Q3

41. G. Palai, B. Nayak, S. K. Sahoo, S R Nayak, **S. K. Tripathy**, "Metamaterial based photonics crystal fiber memory for optical computer", ***Optik*** 171 (2018) 393-396. Quartile: Q2
42. R. Mayengbam, **S. K. Tripathy**, G. Palai, S. S. Dhar, "First-principles study of phase transition, electronic, elastic and optical properties of defect chalcopyrite $ZnGa_2Te_4$ semiconductor under different pressures", ***J. Phys. Chem. Solids*** 119 (2018) 193-201. Quartile: Q2
43. D. Dash, C. K. Pandey, S. Chaudhury, **S. K. Tripathy**, "Structural, Electronic, and Mechanical Properties of Cubic TiO_2: A First- Principle Study", ***Chin. Phys. B*** 27 (1) (2018) 017102 (1-9). Quartile: Q3
44. C. S. Mishra, M. Ravikumar, **S. K. Tripathy**, G. Palai, "Study of fiber optic code division multiple access Code families for Application in Optical Communication based on weight and bit error rate", ***Optik*** 154 (2018) 41-46. Quartile: Q2
45. **S. K. Tripathy** and V. Kumar, "Electronic, elastic and optical properties of $ZnGeP_2$ semiconductor under hydrostatic Pressures", ***Mat. Sci. Engg. B*** 186 (2014) 52-58. Quartile: Q2
46. V. Kumar, **S. K. Tripathy**, V. Jha and B. P. Singh, "Second-harmonic generation properties of $A^{II}B^{IV}C_2^{V}$ chalcopyrite semiconductors", ***Phys. Lett A*** 378 (2014) 519-523. Quartile: Q1
47. V. Kumar and **S. K. Tripathy**, "First-principle calculations of the electronic, optical and elastic properties of $ZnSiP_2$ semiconductor", ***J. Alloy Compds.*** 582 (2014) 101-107. Quartile: Q1
48. V. Kumar, **S. K. Tripathy**, V. Jha, "Second order nonlinear optical properties of $A^{I}B^{III}C_2^{VI}$ chalcopyrite semiconductors", ***Appl. Phys. Lett.*** 101 (2012) 192105 (1-5). Quartile: Q1

D. International and National Conference Proceedings:

1. Ram Lagan Safi, S. K. Tripathy, "Modified Low-Power Up/Down Clipping Counter with Transistor-Level Optimization" International Conference on Next Generation Electronics (NEleX 2026), VIT Vellore, India, 2026, held during May, 8-10, 2026. (Virtual Conference)
2. Srinivas Mattaparthi, Chinmaya Kumar Pradhan, **S. K. Tripathy**, Himanshu Karan, "High-performance perovskite solar cell utilizing novel cesium-copper antimony iodide absorber layer for space application" ICMIMT 2026 Cape Town South Africa during May, 13-15, 2026.
3. Jay Kumar Yadav, **S. K. Tripathy**, "Modeling and Numerical Investigation of PCF-SPR Biosensor for Detecting HIV DNA Hybridization using the Refractive Index of the Sample" 10th Electron Devices Technology and Manufacturing (EDTM) during Mar 1-4 2026.
4. Chinmaya Kumar Pradhan, **S.K. Tripathy**, Dipjyoti Das, "A Novel, Lead-Free Double Perovskite Tl_2PdBr_6 Solar Cell Architecture for Space Photovoltaics" International Conference on Quantum Materials (ICQM-2026) NIT Surat during Feb 13-14 2026.
5. Ambuj Toppo, **S.K. Tripathy**, "Numerical simulation and optimization of lead-free $K_2AgInBr_6$ perovskite solar cells using SCAPS-1D" Trends and Advances in Reforming Green Energy Technologies (TARGETS-2026) IIT (ISM) Dhanbad during Feb 13-15 2026.
6. Nitish Kumar, Padmakshya Kar, Trupti R. Lenka, **S. K. Tripathy**, Tanjim Rahman, Injamamul H. Emu, Hieu P. T. Nguyen, "Modelling of AlGaN/GaN HEMT with and without Graded Multiple Quantum Wells for Quantum Computing Applications" 20th IEEE Nanotechnology Materials and Devices Conference (NMDC) during October 9 -11 2025 (Virtual Conference)
7. Jay Kumar Yadav, **S. K. Tripathy**, T. R. Lenka, "Modeling and Numerical Investigation of a Novel SPR Sensor for Detecting Alzheimer's Diseases Using Brain Tissue Sample" 20th IEEE Nanotechnology Materials and Devices Conference (NMDC) during October 9 -11 2025 (Virtual Conference)
8. Srinivas Mattaparthi, **S. K. Tripathy** and Himanshu Karan, "Design and optimization of high-performance lead-free germanium (Ge) based double-perovskite solar cell" 7th International Symposium on Devices, Circuits and Systems (ISDCS), IIEST Shibpur held during May 27-30, 2025.
9. Jay Kumar Yadav, **S.K. Tripathy**, "Modeling and performance investigation of concentration-based photonic biosensor for detection of DNA hybridization" 7th International Symposium on Devices, Circuits and Systems (ISDCS), IIEST Shibpur held during May 27-30, 2025.

10. Barsha Barman, Koushik Guha, **S. K. Tripathy** and Vinod Belwanshi, "Design and Investigation of MEMS Sensor for HIV Virus Detection" 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), IIT Mandi held during June 24-28, 2024. **(IEEE *Xplore*)**
11. Jay Kumar Yadav, **S.K. Tripathy**, "Ring Resonator-Shaped 2D Photonic Refractive Index Based Sensor to Detect the Diabetes Cells Using Monolayer MoS_2" Students Conference on Engineering and Systems (SCES), MNNIT Allahabad, India held during June 21-23, 2024. **(IEEE *Xplore*)**
12. Samparka Dey, **S. K. Tripathy**, "An Efficient Design of Multilayer Reversible Arithmetic & Logic Unit in Quantum-Dot Cellular Automata for Low Power Applications" 2nd International Conference on Device Intelligence, Computing and Communication Technologies (DICCT), Graphic Era University, Dehradun, India held during March 15-16, 2024. 10.1109/DICCT61038.2024.10533076 **(IEEE *Xplore*)**
13. K. Harikrishna, **S. K. Tripathy,** "FPGA Implementation of Modified Compressor for Signal Processing Applications", International Conference on Next Generation Electronics (NEleX 2023), VIT Vellore, India, 2024, held during Dec, 14-16, 2023. 979-8-3503-1908-8/23. **(IEEE *Xplore*)**
14. K. K. Jha, **S. K. Tripathy**, Amel Laref, T. R. Lenka, "Comparative study of Ge-doped $CH_3NH_3Ge_xPb_{(1-x)}$ I_3 perovskite solar cell using SCAPS-1D Simulator Software", 5 NANO 2022, Kottayam, Kerala, India, held during April 28-29, 2022. IEEE Conf. 10.1109/5NANO53044.2022.9828904 **(IEEE *Xplore*)**
15. R. Mayengbam, J. Mazumder, **S. K. Tripathy**, "Structural, Electronic and Mechanical Properties of Formamidinium Lead Halide Perovskites, $[HC(NH_2)_2]PbX_3$ (X=I, Br) from First-principles Calculations" ***Mat. Today Proc.*** 43 (2021) 3627-3630 (SCOPUS).
16. R. Mayengbam, **S.K.Tripathy**, "First principles investigation of electronic and optical properties of cubic perovskite $CH_3NH_3PbX_3$ (X=I, Cl)" ***Mat. Today Proc.*** 48 (2022) 633-635 (SCOPUS).
17. A. Srivastava, Piyush Dua, T.R. Lenka, **S.K.Tripathy**, "Numerical simulations on CZTS/CZTSe based solar cell with ZnSe as an alternative buffer layer using SCAPS- 1D" ***Mat. Today Proc.*** 43 (2021) 3735-3739.
18. Y. Agarwal, B. Das, A. J. Dutta, A. A. Deka, **S. K. Tripathy**, T. R. Lenka, P. S. Menon, F. Lin, A. G. Aberle, "Numerical Simulation of Tunneling Effect in High-Efficiency Perovskite/Silicon Tandem Solar Cell" 47th IEEE Photovoltaic Specialists Conference (PVSC), Calgary, AB, Canada, 2020, pp. 1318-1322, doi: 10.1109/PVSC45281.2020.9300412., 2020 ***(IEEE).***
19. **S. K. Tripathy**, F. A. Talukdar, "Prediction of Electronic and Optical Properties of Chalcopyrite Semiconductors Using Machine Learning" International Conference on Smart Materials for Sustainable Technology (SMST), Goa, India, Feb. 22-25, 2020.
20. T. R. Lenka, A. C. Soibam, **S. K. Tripathy**, K. Dey, P. S. Menon, M. Thway, F. Lin, A. G. Aberle, "Device Modeling for High Efficiency Lead Free Perovskite Solar Cell with Cu_2O as Hole Transport Material" 14th Nanotechnology Materials and Devices Conference (NMDC), Stockholm, Sweden, Oct. 27-30, 2019. ***(IEEE)***
21. Paramita Sarkar, **S. K. Tripathy**, and K. L. Baishnab, "Investigation of Structural, Topographic and Optical Properties of Triangular Nanostructured Tin Dioxide Films" International Conference on Advanced Research in Applied Science and Engineering (RASECONF), Amsterdam, Netherlands, July 12-14, 2019.
22. Pavani K, **S. K. Tripathy**, P. Puspa Devi, "Design and analysis of QoS based optimized novel optical network emulator for WDM technology" International Conference on Intelligent Computing and Control Systems (ICICCS 2019), VCE Madurai, India, May 15-17, 2019. DOI: 10.1109/ICCS45141.2019.9065470
23. Paramita Sarkar, **S. K. Tripathy**, K. L. Baishnab, "Comparison of synthesized methylammonium lead chloride powders using halide and non-halide source of lead via co-precipitation method", International Meeting on Energy Storage Devices (IMESD), IIT Roorkee, India, Dec 10-12, 2018.
24. Rishikanta Mayengbama, **S. K. Tripathy**, "First-Principles Calculation of Structural, Electronic and Optical Properties of $CdAl_2Te_4$ Semiconductor", Nano/Micro 2D-3D Fabrication, Manufacturing of Electronic–Biomedical Devices & Applications" (IWNEBD-2018), IIT Mandi, India, Oct 31st –Nov 2, 2018.
25. Rishikanta Mayengbama, **S. K. Tripathy**, B. P. Pandey, "Prediction of electronic and optical properties of $ZnAl_2Te_4$ defect chalcopyrite semiconductor: an ab-initio study", 3rd International Conference on Photonics Solutions (ICPS 2017), Imperial Pattaya Hotel, Thailand, held during Nov, 8-10, 2017. (**SPIE Conf. Proc.**)

26. Debashish Dash, Saurabh Chaudhury, **S. K. Tripathy**, "A Novel Comparative Study of Optical Properties for Natural and High-Pressure Titanium Dioxide: An ab-initio Approach", 4th International conference on Nanotechnology-Applications, Advances and Innovations (NanoCon018)-2018, Oct. 25-26, BVDU, Pune.
27. Debashish Dash, S. Chaudhury, **S. K. Tripathy**, "First principle investigation of structural and optical properties of cubic titanium di-oxide", 2nd International Conference on Condensed matter and Applied physics (ICC – 2017), Nov. 24-25, Government Engineering College, Bikaner, Rajasthan, India. American Institute of Phys. AIP Conf. Proc. 1953, (2018) 140147; doi/10.1063/1.5033322. (**AIP Conf. Proc.**)
28. **S. K. Tripathy**, G. Sahu, "Ground state properties of $LiNbO_3$ from first principles calculations", 4th Nat. Conf. on Advanced Materials and Radiation Physics (AMRP 2015), SLIET, Longowal, held during Mar, 13-14, 2015. American Institute of Phys. AIP Conf. Proc. 1675, (2015) 020005; doi: 10.1063/1.4929163. (**AIP Conf. Proc.**)
29. B. P. Singh, V. Kumar and **S. K. Tripathy**, "Optical properties and phonon calculation of wurtzite GaN from first-principle calculations", 4th Nat. Conf.on Advanced Materials and Radiation Physics (AMRP 2015), SLIET, Longowal, will held during Mar, 13-14, 2015. American Institute of Phys. AIP Conf. Proc. 1675, (2015) 030046; doi: 10.1063/1.4929262. (**AIP Conf. Proc.**)
30. **S. K. Tripathy**, P. K. Khatua, and V. Kumar, "Linear properties of $ZnGeX_2$(X = P,As) semiconductors: A first-principle Approach", Int. Conf. on Recent Trends in Applied Phys. & Mat. Sci. (RAM 2013), Bikaner, India, held during Feb, 01-02, 2013. American Institute of Phys. AIP Conf. Proc. 1536 (2013) 303-304; doi: 10.1063/1.4810221. (**AIP Conf. Proc.**)
31. B. P. Pandey, **S. K. Tripathy** and V. Kumar, "Heat Capacity of $LiInX_2$ (X=S, Se, Te) compounds", Students Conf. on Engg. and Systems (SCES 2012), MNNIT, Allahabad, India, held during Mar, 16-18, 2012. IEEE Explore 2012, 978-1-4673-0455-9/12. (**IEEE *Xplore***)
32. **S. K. Tripathy** and V. Kumar, "Ab-initio Calculation of $ZnGeAs_2$ Semiconductor", 58th DAE-Solid State Solid Physics Symposium, 2013, Thapar University, Patiala, held during Dec 17-21, 2013, American Institute of Phys. AIP Conf. Proc. 1591 (2014) 1084. (**AIP Conf. Proc.**)
33. **S. K. Tripathy** and V. Kumar, "Theoretical investigation of structural, electronic and optical properties of $ZnGeAs_2$ under pressure", ICMAP 2013, ISM Dhanbad, held during Dec 13-15, 2013. IEEE Conf. 978-1-4799-2174-4/13/$31.00 ©2013 IEEE. **(IEEE *Xplore*)**
34. V. Kumar, B. P. Singh, and **S. K. Tripathy**, "First-principle calculation of elastic and Debye temperature of ternary chalcopyrite semiconductors", ICMAP 2013, ISM Dhanbad, held during Dec 13-15, 2013. **(IEEE *Xplore*)**
35. Ch. Praveen, **S. K. Tripathy** and R. Tripathi, "High Performance Sequential Circuits with Adiabatic Complementary Pass- Transistor Logic (ACPL)", TENCON, 2009, Suntec, Singapore, 2009, held during Nov, 23-26, 2009. IEEE Explore 2012, 978-1-4244-4547-9/09. **(IEEE *Xplore*)**
36. **S. K. Tripathy** and V. K. Srivastava, "Speed-error tradeoff in CORDIC architecture", CommV, 2009, VIT Vellore, 2009, held during Oct 3-5, 2009.

GAIN/Conferences / Workshops / Short Term Courses Organized:

Sl. No.	Title of the Workshop / FDP / Short Term Courses	Venue	Applicant's Role (Coordinator / Convener)	Duration		
				From	To	No. of Days
1	INSPIRE Internship Science Camp	NIT Silchar	Coordinator	5th July 2016	9th July 2016	05
2	Nanoscience and Technology	NIT Silchar	Co-Coordinator	2nd March 2017	4th March 2017	03
3	Recent trends on Optimization Techniques in Science and Engineering	NIT Silchar	Coordinator	16th Aug. 2018	20th Aug. 2018	05

	(ROTS-2018)					
4	INSPIRE Internship Science Camp	NIT Silchar	Coordinator	10th Dec. 2018	14th Dec. 2018	05
5	National Workshop on Modeling of Novel Nanoelectronic Devices and Circuits for ULSI Technology	NIT Silchar	Coordinator	26 April 2019	30 April 2019	05
6	International Conference on Micro/Nanoelectronics Devices, Circuits, and Systems (MNDCS-2021)	NIT Silchar	Organizing Co-Chairs	29 Jan 2021	31 Jan 2021	03
7	Recent Trends in Nanotechnology and Nanoelectronics: Devices, Circuits, and Systems perspectives	NIT Silchar	Coordinator	01 Sept 2021	05 Sept 2021	05
8	International Conference on Micro/Nanoelectronics Devices, Circuits, and Systems (MNDCS-2022)	NIT Silchar	Organizing Chairs	29 Jan 2022	31 Jan 2022	03
9	International Conference on Micro/Nanoelectronics Devices, Circuits, and Systems (MNDCS-2024)	NIT Silchar	Organizing Chairs	29 Jan 2024	31 Jan 2024	03
10	GAIN course on Implantable Artificial Kidney for Future Kidney on Chip Technology	NIT Silchar	Coordinators	10 Aug 2025	14 Aug 2025	05

R & D Projects Handled:

Sl. No.	Title of project	Role	Funding agency & Project No.	Amount Rs. (lakh)	Duration From -to	Status
1	DST INSPIRE Science Camp	PI	DST	10.20	2015-2016	Completed
2	Effect of metal doped TiO_2 on photoanode and lead free organic-inorganic metal halide perovskite on photovoltaic performance of perovskite solar cell: experimental and theoretical approach	PI	SERB	42.38	2017-2020	Completed
3	DST INSPIRE Science Camp	PI	DST	9.75	2018-2019	Completed
4	High Pressure Phase Transitions, Electronic, Elastic and Optical Properties of Selected Defect Chalcopyrite Semiconductors for Optoelectronic Application	PI	CSIR	18.26	2019-2022	Completed
5	Development of Low-Cost, High-Efficiency and High-Stability Perovskite/Silicon Tandem Solar Cell for Energy Harvesting	Co-PI	SERB	31.94	2019-2021	Completed
6	Development of Low-Cost, High-Stability and High-Efficiency Perovskite Solar Cell for Energy Harvesting: A Theoretical and Experimental Study	Co-PI	CSIR	21.50	2019-2022	Completed
7	Exploring the Radiation Tolerance of Inorganic Perovskite Solar Cells for Space Applications	Co-PI	DST	23.65	2023-2025	Ongoing
8	Design, Epitaxial Growth, Fabrication, and Characterization of III-Nitride Nanostructured Optoelectronics for LED and Solar Cell Applications	Co-PI	SERB	17.78	2024-2025	Ongoing

Invited Talks:

1. Delivered invited talk in Five days STTP on "RESEARCH TRENDS IN RENEWABLE ENERGY SYSTEMS" at Ramrao Adik Institute of Technology, Mumbai, India, 20-24, June 2022.
2. Delivered invited talk in Two days Conference on "IEEE International Conference on Nanoelectronics, Nanophotonics, Nanomaterials, Nanobioscience & Nanotechnology (5NANO 2022)" at Mangalam College of Engineering Ettumanoor, Kottayam, Kerala, India, 28-29, April 2022.
3. Delivered invited talk in Two days workshop on "Digital Hardware Designs Using HDL" at Silicon Institute of Technology, Sambalpur, 20-21, Aug 2021.
4. Delivered invited talk in Two Weeks AICTE sponsored, on "DESIGN OF NANOELECTRONICS AND NANOPHOTONICS DEVICES USING ADVANCED SOFTWARE TOOLs (DONEPAST-2020)" at GITA, Bhubaneswar, April 2021.
5. Delivered invited talk in One-Week Indo-Canada SPARC-Workshop on "RF Energy Harvesting Systems (REHS 2020)" at NIT Silchar, July 2020.
6. Keynote speaker in the international conference on contemporary issues in science, engineering and management (ICCI-SEM) at GIFT, Bhubaneswar, Feb 2017

Students

A. Ph.D. Guided/Awarded: 07

1. Debashish Dash, "**Some Studies on Anatase and Cubic Titanium Dioxide using DFT based Approach"** Awarded on 3rd June 2019 **(Co-Supervisor).**
2. Paramita Sarkar, "**Experimental Study of Organic-Inorganic Lead Chloride Perovskites for Optoelectronic Applications**" Awarded on 11th Feb 2021 **(Co-Supervisor).**
3. Rishikanta Mayengbam, "**Electronic structure and optical properties of doped hybrid organic-inorganic lead perovskites for photovoltaic applications"** Awarded on 7th April 2021 **(Sole Supervisor).**
4. Julaiba T. Mazumder, **"Experimental and Theoretical Investigations on Structural and Optoelectronic Properties of Metal Oxides for Solar Cell Application"** Awarded on 20th Oct. 2021 **(Sole Supervisor).**
5. Ashutosh Srivastava, "**Modelling of Novel Thin Film Solar Cells from Material to Device (M2D)**". Awarded on 27th Aug. 2022 **(Main Supervisor).**
6. Jay Kumar Yadav, "**Design, Modeling, and Numerical Investigation of Photonic Biosensors and Their Applications**" Awarded on 06th April 2026 **(Sole Supervisor).**
7. Srinivas Mattaparthi, "**Investigation on perovskite-based solar cells for achieving augmented performance**" Awarded on 01st Oct. 2026 **(Co-Supervisor).**

Ph.D. Scholars Guiding: 02

1. Venkatesh Nukella, VLSI Interconnects, July 2020 **(Co-Supervisor).**
2. Chinmaya Kumar Pradhan, Perovskite Solar Cells, Aug 2024 **(Main Supervisor).**

B. Masters of Technology (M. Tech)

Sl. No.	*Name of Students(s)*	*Title of Thesis*	*Year*	*Status*
1.	Mr. Ram Lagan Safi	Modified Low-Power Up/Down Clipping Counter with Transistor-Level Optimization	*2025-26*	Completed
2.	Mr. Ambuj Toppo	SCAPS-ML Integration for Double Perovskite Solar Cell Device Optimization: A Multi-Parameter Framework	*2025-26*	Completed
3.	Mr. Rudrakshi Praveen Kumar	A Comparative Analysis of Enhancing Performance of Server System Security Using Trusted Execution Technology on Data Center Servers	*2024-25*	Completed
4.	Mr. Samparka Dey	Towards Next-Gen Computing: An Efficient Design of Multilayered Reversible ALU in Quantum-Dot Cellular Automata	*2023-24*	Completed
5.	Ms. Barsha Barman	Design and Investigation of MEMS Biosensor for Detection of HIV (Human Immunodeficiency Virus) Disease	*2023-24*	Completed
6.	Mr. K Harikrishna	Design and Development of a Novel Fast Multiplication Technique using a modified Compressor	2022-23	Completed
7.	Mr. Kapil Kumar Jha	Graphene Nanoribbon Field Effect Transistor for Biosensing Applications	2021-22	Completed
8.	Ms. Shreyasee Naskar	Study of Interface between of pure Li and lithium oxide using classical	2020-21	Completed

		molecular dynamic simulation		
9.	Ms. Shivani Solanki	Study of radiation effects on materials to design a stable PMOS dosimeter	2020-21	Completed
10.	Mr. Prasanth Kumar	Validating Partial Reconfiguration for Intel FPGA	2019-20	Completed
11.	Mr. Abhishek Kumar	Some studies on electronic, optical and thermal properties of ternary chalcopyrite semiconductors using machine learning	2018-19	Completed
12.	Mr. Karma Lama	Investigation of Structural & Optical Properties of TiO_2 Nanowire for Photodetector Application	2017-18	Completed
13.	Mr. Rahul Shandilya	First principle study of structural, electronic, elastic and optical properties of $ZnXP_2$ (X=Si,Ge) semiconductors	2014-15	Completed
14.	Mr. Ravi	Study of structural, electronic, elastic and optical properties of $XSiAs_2$ (X=Zn, Cd) ternary semiconductors	2014-15	Completed
15.	Mr. Sanjeev Kumar	Performance Analysis of CORDIC architecture	2014-15	Completed

C. Bachelors of Technology (B. Tech.)

Sl. No.	*Name of Students (s)*	*Title of Thesis*	*Year*	*Status*
1.	Mr. Toran Mr. Dipankar	Study of semiconductor material for solar cell applications	2016-17	Completed
2.	Ms. Mandeepa Ms. Meghna	Study of electronic and optical properties of some semiconductor materials using density functional theory	2016-17	Completed
3.	Mr. Susheel Mr. Gaurav	Implementation of Booth's multiplier algorithm on FPGA board	2016-17	Completed
4.	Mr. Monojit Saha Mr. Deepankar Malakar Ms. Deepa Yadav Mr. Dijit Bori	Effect of composition on electronic and optical properties of $In_xGa_{1-x}N$	2017-18	Completed
5.	Mr. Subham Paul Mr. Sannidhi Sai Prudvi Krishna Mr. Vikash Sen	Study of Electronic and Optical properties of $Al_xGa_{1-x}As$ Using Density Functional Theory	2017-18	Completed
6.	Mr. Shah Alam Mazumder Mr. Bipul Nath	Prediction of energy gap, refractive index and dielectric constant of binary semiconductors using machine learning	2018-19	Completed
7.	Ms. K. Pavani Mr. K. Ashok Kumar	Design of optimized novel optical network emulator for WDM technology	2018-19	Completed
8.	Ms. Sananda Nath Mr. Anmun Chetry	Design & Optimization of Solar Cell Parameters for enhanced photovoltaic performance	2018-19	Completed
9.	Ms. Nalam Divya Sree Mr. Ashim Das	Estimation of Capacity and Remaining Useful Life (RUL) of a Lithium-Ion Battery using Deep Learning Techniques	2019-20	Completed
10.	Mr. Neelav Choudhury Mr. Shahirul Islam Polak	Design and Simulation of High Efficiency Perovskite Solar Cells	2019-20	Completed
11.	Mr. Aman Kumar Mr. Himanku Gogoi Mr. Shivam Tripathi Mr. Akashjyoti Hazarika	Optimal Prediction of Electronic and Elastic Properties of Defect Chalcopyrite Semiconductors	2020-21	Completed
12.	Mr. Dinesh Pamidi Mr. Ankaj Kumar Mr. Kunal Horo Mr. Kasarapu Ravi Kiran Mr. Bharathi Dushyanth	Exploring the Stacking Effects of CZTS and Perovskite absorbers on device performance in thin film solar cells	2021-22	Completed
13.	Ms. Medida Rasagna Ms. Abhilasha Chaubey Mr. Chemuru Sivasai Kumar Reddy	Determining Refractive Index of Perovskite Materials from Energy Band-gap using Machine learning	2022-23	Completed
14.	Mr. Swaraj Pal Kesari Mr. Bijay Kumar Shah Mr. Raj Kishan	Supercapacitor Discharge Time-Analysis using Drude Model	2022-23	Completed
15.	Mr. Rijuanur Rahman Mr. Harsh Chichad Mr. Bhaskar Bora	Integration of Buzzer Handglove with Location Based Wheelchair: A Prototype	2023-24	Completed
16.	Mr. Akash Sonowal Mr. Rahul Deka	Design a Specialized Prototype of Buzzer Handglove cum Location Based Wheel Chair (Buzzer Hand Gloves)	2023-24	Completed
17.	Mr. Dasari Teja	Exploration of CZTS and Perovskite Solar Cells for Space Applications	2024-25	Completed

	Mr. M. Rajesh Reddy Mr. Avanish Singh			
18.	Mr. Bhisetti S L S S Lokesh Mr. Balthi Sharan Teja	Design and Implementation of Booth Multiplier using Reversible Logic	2024-25	Completed
19.	Ms. Kali Rishmitha Roy Mr. Pranay Saikia Mr. Pavan Teja Mr. Pilli Thrinath Mr. Aniket Paul	CORDIC accelerated FPGA cloud platform for TinyML interence	2025-26	Completed

Country Visited: Netherland, Slovakia, Bangkok, Austria, Czech Republic, Hungary, South Africa

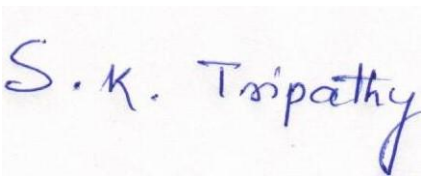
Outreach Activities:

1. Session Chair for the 17th International Conference on Mechanical and Intelligent Manufacturing Technologies (ICMIMT) held during 13-15th May 2026.
2. Received IETE Fellowship for Mr. Chinmaya Kumar Pradhan in 2026.
3. Expert member for faculty selection in VIT Vellore on 22nd Feb 2025.
4. Session Chair for the online International Conference on Computing, Communication and Power Technology (IC3P-2022) held during 6-7th Jan 2022.
5. Session Chair for the online International Conference on Computational Intelligence & Sustainable Technologies (ICoCIST-2021) held during 28th-30th Oct. 2021.
6. Session Chair for the online 3rd International Conference on Communication and Computational Technologies (ICCCT 2021) held during 27th -28th Feb 2021.
7. Ph.D Thesis Examiner of Sathyabama Institute of Science & Technology, Chennai – 600119, Tamilnadu. India. held on 18th Jan 2021.
8. Session chair for virtual – 3rd International Conference on Electronics, Computer and Communication (ICAECC) held 11-12th Dec 2020.
9. Acted as a question paper setter, Biju Patnaik University of Technology, Rourkela 2020.
10. Acted as a question paper setter, GITAM University, Visakhapatnam 2019.
11. Acted as a question paper setter, Bahra University 2018.
12. Acted as a question paper setter, Bahra University 2017.

International Collaborators:

1. **Prof. A. G. Aberle and Dr. Lin Fen Serena**, Solar energy Research Institute of Singapore (SERIS), National University of Singapore (NUS), Singapore.
2. **Prof. P. S. Menon**, Institute of Microengineering and Nanoelectronics (IMEN), Universiti Kebangsaan Malaysia (UKM), Selangor, Malaysia.
3. **Prof. Pavol Hvizdos**, Institute of Materials Research, Slovak Academy of Sciences, Watsonova 47, 04001 Kosice, Slovakia.
4. **Prof. Per Erik Vullum,** SINTEF Industry, NO-7034 Trondheim, Norway

This is to certify that the statements made above are true and correct to be best of my knowledge and belief.



(Susanta Kumar Tripathy)