

## *Awardees*

*Year 2024 – 25*

### *Winner*

***Rahul Kumar***

*Institute: Jawahala*

*Supervisor: Prof Sudhansu S Mandal*

*Project Title: “Novel Topological Phase of  $5/2$  Quantum Hall State”*

### *Runner Up - I*

***Papia Panda***

*Institute: University of Hyderabad, Hyderabad, Telangana*

*Supervisor: Prof Rukmani Mohanta*

*Project Title: “Determination of Neutrino Mass Ordering from Supernova Neutrinos with T2HK and DUNE”*

### *Runner Up - II*

***Arup Biswas***

*Institute: The Institute of Mathematical Sciences, Chennai, Tamil Nadu*

*Supervisor: Dr Arnab Pal*

*Project Title: “Thermodynamic Work of First Passage Processes under Stochastic Resetting”*

## ***Year 2023-24***

### ***Winner***

***Sudipto Das***

*Institute: Indian Institute of Technology Kharagpur, West Bengal*

*Supervisor: Prof Sudhansu S Mandal*

*Project Title: “Novel Topological Phase of 5/2 Quantum Hall State”*

### ***Runner Up - I***

***Vinod Panwar***

*Institute: Indian Institute of Science, Bangalore, Karnataka*

*Supervisor: Prof Abha Misra*

*Project Title: “Gate Field Induced Extraordinary Energy Storage in MoS<sub>2</sub>-Graphene-Based Ultramicro-Electrochemical Capacitor”*

### ***Runner Up - II***

***Dipak Maity***

*Institute: Tata institute of fundamental research, Hyderabad, Telangana*

*Supervisor: Dr T N Narayanan*

*Project Title: “Strain-Tunable Ultrastable MoS<sub>2</sub>/Fluorographene Hybrid Photodetectors of High Responsivity”*

**Year 2022-23**

**Winner**

**Manali Nandy**

*Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamil Nadu*

*Supervisor: Dr. John Philip*

***Project Title: "Inter-Droplet Force Measurement between Gamma Alumina Stabilized Pickering Nano Emulsion Droplets: Role of Electrostatic and Electric Dipolar Interactions"***

**Runner up I**

**Y R Kartik**

*Manipal Academy of Higher Education, Manipal, Karnataka*

*Supervisor: Prof. Sujit Sarkar*

***Project Title: "Topological Quantum Phase Transitions and Criticality in Longer-Range Kitaev Chain"***

**Runner Up II**

**Praveen Kumar**

*Indian Institute of Technology, Patna, Bihar*

*Supervisor: Prof. Naveen K Nishchal*

***Project Title: "Structured Light Beams and its use in Optical Encryption"***

## ***Year 2021-22***

### ***Winner***

***Manali Nandy***

*Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamil Nadu*

*Supervisor: Dr. John Philip*

***Project Title: "Inter-Droplet Force Measurement between Gamma Alumina Stabilized Pickering Nano Emulsion Droplets: Role of Electrostatic and Electric Dipolar Interactions"***

### ***Runner Up I***

***Y R Kartik***

*Manipal Academy of Higher Education, Manipal, Karnataka*

*Supervisor: Prof. Sujit Sarkar*

***Project Title: "Topological Quantum Phase Transitions and Criticality in Longer-Range Kitaev Chain"***

### ***Runner Up II***

***Praveen Kumar***

*Indian Institute of Technology, Patna, Bihar*

*Supervisor: Prof. Naveen K Nishchal*

***Project Title: "Structured Light Beams and its use in Optical Encryption"***

## ***Year 2020-21***

### ***Winner***

***Subhajit Sinha***

*Tata Institute of Fundamental Research, Mumbai, Maharashtra.*

*Project Title: “Bulk Valley Transport in Twisted Double Bilayer Graphene”*

### ***Runner Up I***

***Leelashree S***

*University of Hyderabad, Hyderabad, Telangana.*

*Project Title: “Structural and Magnetic Properties of Room Temperature Multiferroic  $\text{Lu}_{0.9}\text{Ho}_{0.1}\text{FeO}_3$ ”*

### ***Runner Up II***

***Seemesh Bhaskar***

*Sri Sathya Sai Institute of Higher Learning, Puttaparthi, Andhra Pradesh*

*Project Title: “Hybrid Soret Nano-assembly for Ultrasensitive Surface Plasmon-Coupled Emission and Photonic Crystal-Coupled Emission Interfaces”*

## ***Year 2019-20***

### ***Winner***

***Mr. Sukanta Nandi***

*Indian Institute of Science, Bangalore, Karnataka.*

***Supervisor: Prof. Abha Misra***

***Topic for Which Awarded: "Spray Coating of Two-Dimensional Suspended Film of Vanadium Oxide-Coated Carbon Nanotubes for Fabrication of a Large Volume Infrared Bolometer"***

### ***Runner-up – I***

***Name: Mr. Surojit Ranoo***

*Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamil Nadu.*

***Supervisor: Prof. John Philip***

***Topic for Which Awarded: "Enhancement of Heating Efficiency in Magnetic Hyperthermia Based Cancer Therapy upon In-Situ Orientation of Magnetic Nano Fluids"***

### ***Runner Up II***

***Name: Ms. Atasi Ray***

*University of Hyderabad, Hyderabad, Telangana*

***Supervisor: Prof. Rukmani Mohanta***

***Topic for Which Awarded: "Probing New Physics in Semileptonic L Decays b"***

## ***Year 2018-19***

### ***Winner***

***Dr. Atasi Dan***

*Indian Institute of Science, Bangalore, Karnataka*

***Supervisor: Prof. Bikramjit Basu***

***Topic for which Awarded: "Spectrally Selective Tandem Absorbers for Photothermal Conversion in High Temperature Solar Thermal Systems"***

### ***Runner-up – I***

***Dr. Kannan Udaya Mohanan***

*Indian Institute of Technology, Hyderabad, Telangana*

***Supervisor: Dr. J Suryanarayana***

***Topic for which Awarded: "Magnetostrictive Fe Ga Nanocontacts for Low- 73 27 Field Conductance Switching"***

### ***Runner-up – II***

***Mr. Abdul Kalam S***

*University of Hyderabad, Hyderabad, Telangana*

***Supervisor: Prof. Soma Venugopal Rao***

***Topic for which Awarded: "Identification and Classification of Explosives Using Femtosecond Laser Induced Breakdown Spectroscopic Technique at Standoff Distances"***

**Year: 2017 – 18**

**Winner**

**Dr. Buddha Deka Boruah**

*Indian Institute of Science, Bangalore, Karnataka*

*Supervisor: Prof Abha Mishra*

*Topic for which Awarded: “Doping Controlled Pyro-phototronic Effect in Selfpowered Zinc Oxide Photodetector for Enhancement of Photoresponse”*

**Runner-up – I**

**Dr. Raktima Basu**

*Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamil Nadu.*

*Supervisor: Dr. Sandip Dhara*

*Topic for which Awarded: “Origin of Phase Transition in VO and its Application as 2 Advanced Smart Window”*

**Runner-up – II**

**Name: Dr. Abhishek Talapatra**

*Indian Institute of Technology, Hyderabad, Telangana*

*Dr. Jyoti Ranjan Mohanty*

*Topic for which Awarded: “Tuneable Magnetic Domains and Depth-resolved Microstructure in Gd-Fe Thin Films”*

**Runner-up – II**

**Dr. Rafiq Mulla**

*Karnataka University, Dharwad*

*Supervisor: Prof. M K Rabinal*

*Topic for which Awarded: “Copper Iodide: An Eco-friendly Thermoelectric Material”*



***Year: 2016 - 17***

***Physics***

***Winner***

***Mr. Subhadeep Pal,***

*Department of Physics, TIFR Centre for Interdisciplinary Sciences, Narsingi, Hyderabad.*

*Supervisor: Prof. T.N. Narayanan,*

*Paper Presented:*

***"Development of Fluorographene Based Ammonia Sensor."***

***Runner-up – I***

***Mr. K.G. Raghavendra,***

*Department of Physics, Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamilnadu.*

*Supervisor: Prof. Dr. Arup Das Gupta,*

*Paper Presented:*

***"Structural Investigations and Thermal Evolution of ZrO<sub>2</sub> Dispersoid Based ODS Alloys."***

***Runner-up – II***

***Mr. C Vanamali Shastry,***

*Department of Physics, Mangalore University, Mangalagangothri, Karnataka.*

*Supervisor: Prof. Dr. K.B Vijaya Kumar,*

*Paper Presented:*

***"Nucleon Nucleon Interaction with Instanton Induced Interaction and One Pion Exchange."***

***Runner-up – II***

***Mr. N Raju,***

*Department of Physics, Osmania University, Hyderabad.*

*Supervisor: Prof. Yadagiri Reddy,*

*Paper Presented:*

***"Structural and Magnetic Studies of Hexaferrite Based Magneto-Electric Materials."***

**Year 2015-16**

**Physics**

**Winner**

**Mr. V Rakesh Kumar,**

*Advanced Centre of Research in High Energy Materials, Hyderabad, Telangana  
Supervisor: Prof. P Prem Kiran,*

*Paper presented: "Effect of Short Pulse Duration on Transparent Dielectrics: Understanding Water's Mysterious Behavior".*

**Runner-up – I**

**Mr. S Venkatesh,**

*Department of Chemistry, Sri Sathya Sai Institute of Higher Learning, Puttaparthi, Anantapur, Andhra Pradesh.*

*Supervisor: Prof. R Sai Sathish,*

*Paper presented: "1-Minute Cavity Engineering for >1000 Fold Enhancements in Surface Plasmon-Coupled Emission: A Mobile Phone Based Next-Gen Plasmonics Approach".*

**Runner-up – II**

**Mr. Subrata Ghosh,**

*Department of Atomic Energy, Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamilnadu.*

*Supervisor: Prof. M Kamruddin,*

*Paper presented: "Vertical Graphene Nanosheets: A Promising Candidate for Supercapacitor Electrode".*

***Year 2014-15***

***Physics***

***Winner***

***Ms. K Kamali,***

*Indira Gandhi Centre for Atomic Research (IGCAR)*

*Kalpakkam, Tamilnadu.*

*Supervisor: Prof. T R Ravindran,*

***Paper Presented:***

***“Selective Soft Mode Frustration in  $KMn [Ag(CN)_2]_3$  Single Crystals Studied by Raman Spectroscopy and First-Principles Calculations”***

***Runner – up I***

***Mr. Ahin Roy,***

*Supervisor: Prof. Abhishek Kumar Singh,*

*Paper presented:*

***“Intriguing Atomic Structure and Semiconductor-like Sensitivity of Ultrathin Gold Nanowires”***

***Runner – up II***

***Mr. Kuladeep Rajamudili,***

*School of Physics, Central University, Hyderabad, Telangana.*

*Supervisor: Prof. D Narayana Rao,*

*Paper presented:*

***“Femtosecond Laser Micro / Nano Machining on Silicon Surface for Photonic Applications”***

**Year – 2013-14**

**Physics**

**Winner**

**Mr. T Karthik**

*(Supervisor : Dr. Saket Asthana), Indian Institute of Technology, Hyderabad.*

*Paper presented:*

**“Evidence for the suppression of intermediate antiferroelectric ordering and their Structure property correlation in Cobalt substituted  $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$  ceramics.”**

**Runner Up I**

**Mr. P Suresh**

*(Supervisor : Dr. S. Srinath), University of Hyderabad, Hyderabad.*

*Paper presented:*

**“Structural, Electrical, and Magnetic Properties of Pure and Rare Earth Doped  $\text{BiFeO}_3$ .”**

**Runner Up II**

**Mr. M Pradyumna**

*(Supervisor : Prof. K. Venkataramaniah ), Sri Sathya Sai Institute of Higher Learning,*

*Paper presented:*

**“Graphene as a Smart Spacer Material on Engineered Thin Film Hybrids for the Amplification of Surface Plasmon Coupled Emission Towards Sensing.”**

***Year – 2012-13***

***Physics***

***Winner***

***Ms. Sweta Rekha Ram, Indian Institute of Technology, Hyderabad,  
(Supervisor : Dr.V.Kanchana)***

***Paper presented:***

***“Fermi surface studies of Intermetallic Compounds under pressure: Ab-initio study”.***

***Runner Up I***

***Mr. P Suresh, Sri Sathya Sai Institute of Higher Learning, Prasanthinilayam,  
(Supervisor : Prof. K Venkataramanaiah).***

***Paper presented:***

***“ISAR Imaging of Moving Targets and Feature Extraction using Time-Frequency methods”.***

***Runner Up II***

***Mr. P Shankar, University of Hyderabad, Hyderabad, Telangana  
(Supervisor: Dr. Nirmal K Viswanathan).***

***Paper presented:***

***“Polarimetric Investigation of Surface Plasmon Resonance and Applications”***

**Year – 2011-12**

**Winner**

**Mr. P Lakshmi Praveen**, Department of Physics, Andhra Loyola College,  
Vijayawada,

(Supervisor - Prof. Durga P Ojha).

Paper Presented:

**“Molecular Structure, Electronic Spectra and Ultraviolet Stability of Nematic  
Liquid Crystals: Effect of Solvent and Substituent”**

**Runner Up I**

**Mr. K Ramesh Babu**, Advanced Centre of Research in High Energy  
Materials (ACRHEM), Hyderabad,

(Supervisor - Dr. G S Vaitheeswaran)

Paper Presented:

**“Materials for Green Energy Application : A Density Functional Study.”**

**Runner Up II**

**Ms. C Sujatha**, Department of Physics, National Institute of Technology,  
Warangal,

(Supervisor - Dr. K Venugopal Reddy).

Paper Presented:

**“MgCuZn Nanoferrites for Multilayer Chip Inductors”**

## **Year – 2010-11**

### **Winner**

**Ms. Rajeswari Mulakalapalli,**

*Department of Physics, University of Hyderabad.*

*(Supervisor - Prof. V.S.S. Sastry).*

*Paper Presented:*

**“Detection of ultra-slow processes through NMR relaxometry: Application to Liquid Crystals”**

### **Runner Up I**

**Mr. Ch. Bheema Lingam,**

*Department of Physics, University of Hyderabad.*

*(Supervisor - Prof. Surya P. Tewari and Dr. G S Vaitheeswaran).*

*Paper Presented:*

**“Structural, Electronic, Bonding, and Elastic Properties of NH<sub>3</sub>BH<sub>3</sub>: A Density Functional Study.”**

### **Runner Up II**

**Mr. S Jagadees Chandra,**

*Department of Physics, Sri Sathya Sai University, Puttaparthi,*

*(Supervisor - Dr. S. Siva Sankara Sai).*

*Paper Presented:*

**“A Study of Nonlinear Optical Properties of Bacteriorhodopsin Thin Films and Circumin and Their Application in Medical Diagnostics.”**

### **Special Consolation Award**

**Mr. Rama Krishna Chava,**

*Department of Physics, A N University Nagarjuna Nagar,*

*(Supervisor - Dr. R.V.S.S.N. Ravi Kumar).*

*Paper Presented:*

**“Co(II) ion doped Chlorocadmiumphosphate Cd(HPO<sub>4</sub>)Cl·[H<sub>3</sub>N(CH<sub>2</sub>)<sub>6</sub>NH<sub>3</sub>]0.5 crystals: A novel organically templated hybrid open-framework.”**

**Year – 2009-10**

**Winner**

**Mr. K L N Deepak**, Department of Physics, University of Hyderabad,  
(Supervisor - Prof. D. Narayana Rao).

Paper Presented:

**“Fabrication and Optical Characterization of Microstructures in PMMA and PDMS using Femtosecond Pulses for Photonic and Micro Fluidic Applications”**

**Runner Up I**

**Ms. Y. Kalyana Lakshmi**, Department of Physics, Osmania University,  
Hyderabad, (Supervisor - Prof. P. Venugopal Reddy).

Paper Presented:

**“Electrical and Magnetic Behavior of Some Monovalent Doped CMR Materials”**

**Runner Up II**

**Mr. M Anil Kumar**, University of Hyderabad,  
(Supervisor - Dr. Suneel Singh).

Paper Presented:

**“Electromagnetically Induced Transparency and Slow Light in a Three Level System”**



**Year – 2008-09**

**Winner**

**Ms. Barilang Mawlong**, School of Physics, University of Hyderabad,  
(Supervisor - Dr. Rukmani Mohanta).

Paper Presented:

**“Probing New Physics In B - Fo (980) K Decays”**

**Runner Up I**

**Mr. B. Maruthi Manoj**, School of Physics, University of Hyderabad,  
(Supervisor - Professor D. Narayana Rao).

Paper Presented:

**“Nanodisplacement measurement using spectral shifts in a white-light interferometer”**

**Runner Up II**

**Ms. G Padmaja**, Department of Physics, Osmania University, Hyderabad,  
(Supervisor - Professor P. Kistaiah).

Paper Presented:

**“Optical absorption studies on mixed alkali borate glasses”**

**Special Awards to Out-Station Candidates**

**Physics**

**K. Raghavendra Kumar**, Department of Physics, Sri Krishna Devaraya  
University, Anantapur, (Supervisor - Prof. R. Ramakrishna Reddy).

Paper Presented:

**“Optical, Physical And Radiative Properties Of Aerosols In A Semi-Arid  
Region, Anantapur.”**

***Year – 2007-08***

***Winner***

***Mr. R. Sai Santhosh Kumar, School of Physics, University of Hyderabad, Hyderabad. (Supervisor - Prof. D. Narayana Rao).***

***Paper Presented:***

***“Broadband supercontinuum generation in a single Potassium Di-hydrogen Phosphate (KDP) crystal achieved in tandem with sum frequency generation”***

***Runner Up I***

***Ms. P. Sarita, Gitam Institute of Technology, Andhra University, Visakhapatnam. . (Supervisor - Prof. S. Bhuloka Reddy).***

***Paper Presented:***

***"PIXE Analysis - A Novel Diagnosis and Pronostic Approach to Cancer of the Uterine Cervix."***

***Year – 2006-07***

***Winner***

***Mr. M. Raghavender, Osmania University, Hyderabad.***

*(Supervisor - Dr. G. Prasad).*

*Paper Presented:*

***“Modification of dielectric relaxations in sodium bismuth titanate with samarium doping”***

***Runner Up I***

***Mr. G. Venkataiah, Osmania University, Hyderabad.***

*(Supervisor - Prof. P. Venugopal Reddy).*

*Paper Presented:*

***“Structural, magnetic and electrical behaviour of some manganite based CMR materials”***

***Runner Up II***

***Mr. N. Venkatram, University of Hyderabad, Hyderabad.***

*(Supervisor - Prof. D. Narayana Rao).*

*Paper Presented:*

***“Non-linear absorption and Scattering properties of cadmium sulphide nanocrystals with its application as a potential optical limiter”***

**Year – 2005-06**

**Winner**

**Dr. T. Goverdhan Reddy, Osmania University, Hyderabad.**

*(Supervisor - Dr. K. Rama Reddy).*

*Paper Presented:*

**“Study of the Spin and Lattice Polaron Dynamics in CMR Manganites”**

**Runner Up I**

**Ms. N. Ajeetha, Acharya Nagarjuna University, Guntur.**

*(Supervisor - Prof. V.G.K.M. Pisipati).*

*Paper Presented:*

**“Liquid Crystals Influence of Oxygen an Phase Behaviour of Benzylidene Anilines”**

**Runner Up II**

**Mr. K. Prabhakar, Osmania University, Hyderabad.**

*(Supervisor - Prof. S.P. Mallikarjun Rao).*

*Paper Presented:*

**“AC Fatigue Studies on PZT Ceramics using Acoustic Emission (Broad Area :Material Science)”**