

2023 Gold Medal Recipients



President's Gold Medal

Awarded for the **Best Academic Performance**
amongst all disciplines of the BS-MS (Dual Degree)

Vatsalya Sharan, Department of Physics

Vatsalya Sharan joined IISER Bhopal in 2018 through the SCB channel. In the graduating class, he has achieved the highest CPI of 9.89 on a 10 point scale, with the highest possible SPI of 10.00 in seven semesters. He was selected to participate in Perimeter Institute's esteemed PSI START Programme 2022 in Theoretical Physics. He has actively participated in the department activities and won the Best Poster Award at the Physics In-House Symposium 2023. He was also a member of the IISERB Astronomy Research group. Apart from academics, he has been an athlete representing IISER Bhopal at the Inter-IISER Sports Meet (IISM) for three years, and won silver medals in badminton and cricket. He was also an eager participant in the Intra-IISERB Sangharsh. Along with sports, he was a part of the Career Development Cell for two years. He pursued his MS Thesis under Dr. Rahul Srivastava on the Constraining Light degrees of freedom in Particle Physics through Cosmology. He has decided to join the Department of Physics at the University of Pittsburgh, Pennsylvania, for his doctoral studies.



Director's Gold Medal

Awarded for **Outstanding All-Round Achievement and Leadership**
amongst all disciplines of the BS-MS (Dual Degree)

Padmanav Baruah, Biological Sciences

Padmanav Baruah joined IISER Bhopal as an INSPIRE fellow in 2018. He completed his BSMS degree with a CPI of 9.63 in Biological Sciences major. He pursued his MS thesis with Dr. Anand Krishnan at the Ecological, Community and Evolutionary Bioacoustics Lab focused on breeding season ecology and behaviours of larks from semi-arid regions of India. He has been a regular face in the institute football team at Inter IISER Sports Meets, helping win two gold medals and one bronze medal. He has also been a part of the institute lawn tennis team and has won medals across multiple sports in Intra IISER Sports Meets over the years. In his five years at IISER Bhopal, Padmanav has been Football Coordinator, Sports Council Core Committee member, Secretary of the Sports Council, CAC member and IISER Bhopal Quiz Club Working Committee member. He has won quizzes within and outside the institute, along with photography competitions and futsal tournaments organised within the institute. A DAAD-WISE scholar, Padmanav was ranked AIR 39, CSIR Net Life Sciences (2022), and aspires to pursue a PhD in bird research.



2023 Proficiency Medal Recipients

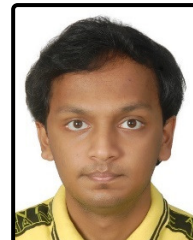
Awarded for the **Best Academic Performance** in each discipline of BS-MS (Dual Degree)



Proficiency Medal in Biological Sciences

Archit Devarajan

Archit Devarajan joined IISER Bhopal as an INSPIRE Scholar in 2018. He secured a CPI of 9.86 on a 10 point scale in the graduating class with the highest possible SPI of 10.0 in six semesters. He was selected for the prestigious DAAD-WISE Scholarship in 2021 and Mitacs Globalink Research Internship in 2022. He has also successfully completed internships at TIFR Mumbai and IISER Pune. He was part of IISER Bhopal's first gold medal-winning team at the iGEM 2020 Competition. He led the iGEM team to success in Together 2021, an Indo-Canadian entrepreneurship bootcamp and venture competition and won a prize of CAD 20,000. He pursued his MS Thesis project at Harvard University, USA under Prof. Samir Mitragotri's guidance on Dual-drug approach to enhance cancer chemotherapy. He was actively involved in extracurricular activities as a part of the Science Council Core Committee in 2020, an Innovation Leader at IICE and as the Treasurer for Singularity 2021 and IISERB MUN 2020.



Proficiency Medal in Chemistry

Shibashis Nayak

Shibashis joined IISER Bhopal in 2018 through SCB channel and cleared the KVPY selection process in first year with AIR 107 (SB stream). He secured a CPI of 9.67 on a 10-point scale in the graduation class with highest possible SPI of 10.0 in four semesters. He was interested in pursuing a research career in material science with specific interests in the field of energy storage (batteries and supercapacitors). He joined Functional Materials laboratory in May 2022 in the final year of BSMS and worked on two projects simultaneously. The first project was related to synthesis and characterization of porous organic polymers for sequestration of oxoanions from water. As part of my MS Thesis, He worked on synthesis and characterization of Covalent Organic Frameworks (COFs) for sodium-ion battery applications. He qualified CSIR-NET JRF with AIR 91, GATE with AIR 280 and TIFR GS exam. He will be joining CSC Graduate School, University of Strasbourg France for his higher studies.



Proficiency Medal in Earth and Environmental Sciences

Sreevathsa Golla

Sreevathsa Golla joined IISER Bhopal in 2018 through the SCB channel. He graduated with a CPI of 8.81 on a 10-point scale, with a major in Earth and Environmental Sciences and a minor in Data Science and Engineering. He was awarded the MITACS Globalink Research Internship in 2022 to pursue a summer research project at the University of Alberta, Canada. He pursued his MS Thesis on understanding the representation of ocean currents in multiple numerical models and their relationship with climate variability, in the Climate and Glacier Modelling Lab, IISER Bhopal. He has contributed as the coordinator and advisor of the EES Club. He was also the Vice-secretary and core committee member of the CNC. He had participated in TROPMET, FGRC, and NSM GPU Hackathon. He has been awarded the INSPIRE DTP studentship, Natural Environment Research Council (NERC) – UKRI, to pursue a PhD in Ocean and Earth Science at the National Oceanography Centre and the University of Southampton, United Kingdom.



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Proficiency Medal in Mathematics

Mandon Mridul Pathak

Mandon Pathak joined IISER Bhopal in 2018 through the SCB channel. He secured an SPI of 10 on a 10-point scale for two semesters and a CPI of 9.19 on a 10-point scale, the highest in his department. In 2020, he was elected as their batch's department representative (DR). He has been very actively involved in proactive discussion among all of the students in the department from different programs. He has attended various workshops and seminars organized by the department and has participated actively in departmental celebrations. For his Master's thesis, he worked on the advanced techniques in Partial Differential Equations (PDEs) to solve general linear second-order elliptic PDEs and some important developments in the field of integral transforms such as X-Ray transform, Radon transform, etc. He will be joining Purdue University to pursue Ph.D. in the field of analysis and Partial Differential Equations.



Proficiency Medal in Physics

Vatsalya Sharan

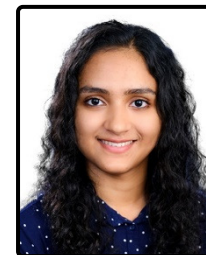
Vatsalya Sharan joined IISER Bhopal in 2018 through the SCB channel. In the graduating class, he has achieved the highest CPI of 9.89 on a scale of 10.00, with the highest possible SPI of 10.00 in seven semesters. He was selected to participate in Perimeter Institute's esteemed PSI START Programme 2022 in Theoretical Physics. He has actively participated in the Physics department activities and has won the Best Poster Award at the Physics In-House Symposium 2023. He was also a member of the IISERB Astronomy Research group. He earned his master's in Physics. He has decided to join the Department of Physics at the University of Pittsburgh, Pennsylvania, for his doctoral studies.



Proficiency Medal in Chemical Engineering

Sneha Thomas

Sneha Thomas joined IISER Bhopal in 2018 through the SCB channel. She pursued a major in Chemical Engineering and a minor in Chemistry, achieving the highest CPI of 8.93 on a 10-point scale within her graduating class. She conducted research in computational nanotechnology under the guidance of Dr. Ananth Govind Rajan in the Chemical Engineering Department of the Indian Institute of Science. For her Master's thesis, she compiled a comprehensive database encompassing all possible shapes of graphene nanopores and published her work as a lead author in the Journal of Chemical Information and Modelling. She worked on inertial microfluidics and emulsions. She also has experience working as a Quantum Research Intern at ODE, L3C, a quantum research company in the United States. Additionally, she was an Innovation Leader in the IICE at IISER Bhopal. She represented IISER Bhopal in both volleyball and athletics at the IISM and earned a bronze medal in volleyball. Recently, she was awarded the prestigious Dean's Doctoral Scholarship Award from the University of Manchester and will embark on her doctoral journey pursuing a Ph.D. in Chemical Engineering.



2023 Proficiency Medal Recipients

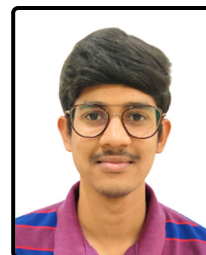
Awarded for the **Best Academic Performance** in each discipline of BS-MS (Dual Degree)



Proficiency Medal in Electrical Engineering and Computer Science

Desaraju Harsha Vardhan

Desaraju Harsha Vardhan joined Engineering Sciences at IISER Bhopal in 2018 through JEE stream. He secured a CPI of 9.56 on a 10-point scale. He has completed BS-MS with a major in Electrical Engineering and Computer Science (EECS) and a double minor in Data Science and Engineering (DSE) and Mathematics. He was selected for the prestigious Summer Research Fellowship Programme of the Indian Academy of Sciences in his 2nd year and did an industrial internship after his 4th year. He did his MS thesis in theoretical Machine Learning under Dr. Sujoy Bhore of IIT Bombay. He is interested in Artificial Intelligence and Machine Learning and is pursuing a career as a Data Scientist in the industry.



Proficiency Medal in Economic Sciences

Sahla Abdu

Sahla Abdu joined IISER Bhopal through SCB channel in 2018. She has completed a BS-MS dual degree in Economics, with a Minor in Humanities and Social Sciences expanding her knowledge horizons across diverse fields of study. Under the supervision of Dr. Vipin V, she completed her MS thesis on performance evaluation of Indian banks using Data Envelopment Analysis (DEA) and incorporating game theoretical concepts. Having successfully cleared the first edition of GATE Economics in 2021, she embarked on her journey in the field of academia. Currently, she is pursuing Doctoral Program in Management (DPM) at the prestigious Indian Institute of Management (IIM) Kozhikode, specializing in the field of Economics. This prestigious program offers her the opportunity to engage in advanced research and scholarship, enabling her to make valuable contributions to the field.



2023 Proficiency Medal Recipients

Awarded for the **Best Academic Performance** in each discipline of BS



Proficiency Medal in Data Science and Engineering

Abhinav Sethi

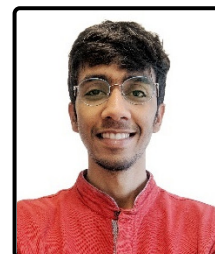
Abhinav Sethi joined IISER Bhopal in 2019, in the department of Data Science and Engineering. He has secured a CPI of 8.99 on a 10-point scale. He has attained a dual degree with a major in Data Science and a minor in Economics. He was the Vice Chair of the ACM Student Chapter at IISERB. Throughout his Bachelors, he has constantly been developing his interest, skills and knowledge around data science, AI and ML and gaining practical experience through internships. In the winter of 2021, he carried out a research internship in the area of machine learning for graphs at IISERB, and in the summer of 2022, he interned at an agritech startup focusing on the use of AI to help farmers across India. He interned in their AI team, working on satellite data for solving various problems. He carried out his bachelor's thesis at the same startup on Soil Testing using hybrid data sources and hybrid models, involving Computer Vision, geospatial data science, spectral analysis and statistical methods. He also developed an algorithm for farm spray area detection using GPS pings during his BS thesis. Additionally, he has won various cognitive and creative thinking events like Looking glass, Treasure Hunt, and many online events of multiple universities. He has also organised the treasure hunt of Singularity 2022 at IISERB. Next, he will be exploring the field of AI across various domains and use-cases in the industry before pursuing further studies.



Proficiency Medal in Electrical Engineering and Computer Science

Jaydev Singh Rao

Jaydev Singh Rao joined IISER Bhopal in 2019 through the SCB channel with an interest to study theoretical computer science and physics. I later developed a research interest in the field of computational many-body physics. I am currently doing a research internship in this domain at the University of Augsburg through the DAAD WISE scholarship. I also have a keen interest in open source scientific software, for which I have been involved in open development in the Julia programming language through funding from Google Summer of Code in 2022 and NumFOCUS in 2023. After my BS in Electrical Engineering and Computer Science from IISERB, I will be joining the MAST in Physics programme at the University of Cambridge.



2023 Best Ph.D. Thesis Award Recipients



BIOLOGICAL SCIENCES

Vishnu Prasoodanan P K

Thesis Title: Multipopulation Analyses using Metagenomics and Metabolomics Reveal Roles of Human Gut Microbiome in Carbohydrate Metabolism and Mouth-gut Axis.

Thesis Supervisor: **Dr. Vineet Kumar Sharma**

Vishnu holds Bachelor's and Master's degrees from the Department of Biological Sciences, IISER Bhopal. He conducted his Master's thesis project under the supervision of Dr. Vineet K Sharma in the same department. During this period, his research focused on the reconstruction of bacterial and viral genomes from multiple metagenomes. Additionally, he curated and analyzed NGS 16S rRNA and whole metagenomic data from various environments, including river ecosystems, human gut, oral microbiome, and skin microbiome. Continuing in the same research group, Vishnu pursued his doctoral studies, where he conducted a comprehensive analysis of the composition, diversity, and functional role of Prevotella species in the global gut microbiome. His research included the largest healthy cohort from the Indian population, which primarily follows plant-based diets. Furthermore, he investigated the impact of tobacco consumption on the oral microbiome in both healthy individuals and oral cancer patients



CHEMISTRY

Abhishek Kumar

Thesis Title: Exploring Homogeneous Transition Metal-Based CO₂ Reduction Catalysis via Transfer Hydrogenation and Electrochemical Routes

Thesis Supervisor: **Prof. Joyanta Choudhury**

Abhishek Kumar joined IISER Bhopal as an Integrated-Ph.D. student at Department of Chemistry in 2015. He earned his Master's degree (MS Chemistry) in 2018 from IISER Bhopal and pursued his doctoral research in Prof. Joyanta Choudhury's lab at IISER Bhopal. In September 2022, he defended his Ph.D. thesis entitled "Exploring Homogeneous Transition Metal-Based CO₂ Reduction Catalysis via Transfer Hydrogenation and Electrochemical Routes". Currently, he is a Postdoctoral Associate in Prof. Nilay Hazari's group at Yale University, USA.



2023 Best Ph.D. Thesis Award Recipients



EARTH AND ENVIRONMENTAL SCIENCES

Shreeja Das

Thesis Title: Quantification of Azimuth & Magnitude of Recent Crustal Stresses & Their Accumulation in Initiating Landslides and Active Faults by FEMR Technique

Thesis Supervisor: **Dr. Jyotirmoy Mallik**

Shreeja Das joined the department of Earth & Environmental Sciences, IISER Bhopal as an institute PhD fellow in the year 2017 with a Masters degree in Physics. Her choice to venture into the world of Earth Sciences was to actively visualize the laws of physics unfolding in the “natural laboratory” of Earth Systems. Her research on the application of the Fracture Induced Electromagnetic Radiation (FEMR) Technique in numerous geological studies further emboldened her resolve to pursue her PhD, since it was a novel technique which could directly aid in developing mitigation strategies for natural disasters such as landslides and earthquakes. She is currently pursuing her Postdoctoral tenure at the Sami Shmoon College of Engineering, Israel with one of the doyens in this field, and hopes to contribute to the natural hazard and disaster management strategies of our country.



PHYSICS

Keerthi Radhakrishnan

Thesis Title: Conformation and Dynamics of Polyelectrolytes under Non-equilibrium Forces

Thesis Supervisor: **Dr. Sunil Pratap Singh**

Keerthi Radhakrishnan joined IISER Bhopal as an Integrated PhD student in 2015 after completing her BSc (Hons.) degree in Physics from University of Delhi with a distinction of 90%. She pursued her Master thesis as well as her PhD thesis under Dr. Sunil Pratap Singh from the Department of Physics. In her research period, she closely worked in the area of Soft Condensed matter physics studying the dynamics of polyelectrolytic systems. She bagged the best poster presenter award at several platforms including the International Conference on complex Fluids and IISER-Bhopal In-house Physics Symposium. She was a speaker at the International Polymer Conference, held in Puri, Odisha. Throughout her PhD tenure she has actively published her research work in many acclaimed peer-reviewed scientific journals. She successfully defended her Doctoral dissertation in October 2022. She has now ascended to the next level of her academic career by securing a Postdoctoral Researcher Position at Institute for Computational Physics, University of Stuttgart .

