www.iitbbs.ac.in

IITBBS Express

Events • Achievements • Expressions

Vol. 57 : Published on 05.11.2026





Picture Credit: Dr. Manas Jyoti Kashyop

IIT Bhubaneswar Observes Vigilance Awareness Week 2026

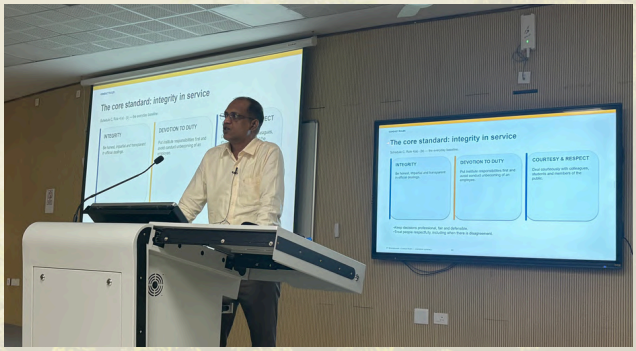
“Probity for Prosperity” highlighted through awareness initiatives and expert talk

IIT Bhubaneswar observed Vigilance Awareness Week from 26th October 2026, which will end on 1st November 2026, aligning with the nationwide campaign to promote transparency, ethical practices, and heightened consciousness against corruption. The theme of this year’s observance is “Probity for Prosperity”.

Ihe observance began with the Integrity Pledge undertaken by the faculty, staff, and students of the Institute, reaffirming their commitment to uphold honesty, accountability, and probity in public life.



As part of the observance, an Awareness session on Conduct Rules, Conflict of Interest and Preventive Vigilance was also conducted for the faculty members and staff of the Institute by Shri Santosh Kumar Sahoo, Deputy Registrar-Establishment on 26th October 2026.







As part of the week-long programme, a special lecture titled “Probity for Prosperity” was delivered by Hon'ble Mr. Justice Sashikanta Mishra, High Court of Orissa on 29th October 2026. In his talk, he explained: “Probity is not only a legal obligation but fundamentally a moral responsibility rooted in India's civilisational and cultural ethos”. True prosperity is reflected not only through the material wealth, but also through the quality of life one is leading with peace, happiness, togetherness etc., imbibing integrity, commitment and righteousness in one's actions. He further emphasised, on the negative injunction in the law, which prescribes penalties for wrongdoers while discharging public service. He stressed that upholding the highest standards of probity is essential for safeguarding public trust, strengthening institutional credibility and ensuring the nation's sustainable prosperity.









Speaking on the occasion, Prof. Shreepad Karmalkar, Director highlighted that “Eternal vigilance is the price of liberty and transparency.” He noted that collective commitment to upholding rules and regulations fosters a lasting culture of probity. Citing an example, he said that since its inception in 1961, JEE (Advanced) has never experienced a paper leak from its question setters. This flawless track record exists despite the setters being IIT faculty members who often have close professional relationships with colleagues whose own children are taking the exam. He stressed that vigilance must become an enduring institutional tradition, sustained through collective responsibility and adherence to ethical practices.

Shri Bamadev Acharya, Registrar, IIT Bhubaneswar introduced the Chief Guest and also highlighted the importance of vigilance and probity for the development of the Nation.

Throughout the week, the Institute engaged its community through awareness campaigns and discussions spotlighting accountability, ethical decision-making, and the role of individuals in strengthening the national fight against corruption.

IIT Bhubaneswar Observes National Unity Day

IIT Bhubaneswar commemorated the birth anniversary of Sardar Vallabhbhai Patel, observed as National Unity Day (Rashtriya Ekta Diwas) on 31st October 2026.



As part of the observance, the Institute organised a Unity Run. The event aimed to foster the spirit of unity, integrity, and national harmony among the campus community. The Unity Run commenced from the Student Activity Centre (SAC), witnessing enthusiastic participation from faculty, officers, staff, students, and residents. Around 150 participants participated in this run. Shri Bamadev Acharya, Registrar of the Institute graced the occasion and flagged off the Unity Run.







The Unity Pledge was also administered to the members of the Institute at the administrative building. Prof. Shreepad Karmalkar administered the pledge to the faculty, staff and students. Around 150 members were present on the occasion. Also, the pledge was administered to the students in the Institute Auditorium.







These initiatives served as a fitting tribute to the Iron Man of India, reaffirming IIT Bhubaneswar's commitment to promoting national unity and collective responsibility among the youth.

IIT Bhubaneswar Hosts ‘Women Achievers Lecture Series’ Featuring Eminent Scientist Prof. Rama Govindarajan

The Women Welfare Committee (WWC) of IIT Bhubaneswar organised the first lecture under its ‘Women Achievers Lecture Series’ on 30th October 2026, featuring Prof. Rama Govindarajan, Senior Professor, International Centre for Theoretical Sciences (ICTS), Tata Institute of Fundamental Research (TIFR), Bengaluru. The lecture, titled ‘A Journey in Science and One Station’, was followed by an interactive session.



Sharing her journey as a woman scientist, Prof. Govindarajan reflected on the influences and experiences that shaped her career, highlighting the challenges of gender discrimination, unconscious bias and workplace inequalities. She emphasised the importance of supportive mentors, institutional encouragement and the confidence to challenge gender-based barriers. She also encouraged young researchers to embrace Artificial Intelligence as a tool for scientific exploration and innovation.

The technical segment of her talk focused on the dynamics of small particles settling in highly viscous fluids, explaining how their shape and flexibility influence their movement. She also highlighted the relevance of this research in understanding microplastic movement in oceans and the role of phytoplankton in the ocean's carbon cycle.

The programme began with a welcome note by Ms. Julis Joy, Student Volunteer, WWC, followed by an introduction of the speaker by Dr. Kiranmoy Landu, Member, WWC. Prof. Shreepad Karmalkar, Director, IIT Bhubaneswar, felicitated the speaker, while Dr. Anasuya Roychowdhury, Chairperson, WWC, delivered the vote of thanks.

The lecture provided an engaging platform for students, researchers and faculty members to gain insights into scientific exploration, gender equity and the evolving nature of research, while drawing inspiration from the journey of an accomplished woman scientist.



IIT Bhubaneswar Signs MoU with People to People Health Foundation to Advance Public Health Innovations

IIT Bhubaneswar has signed a Memorandum of Understanding (MoU) with People to People Health Foundation (PPHF), New Delhi, to explore collaborative opportunities for developing affordable, technology-driven public health innovations and scalable healthcare solutions in India. The MoU was signed on 15th October 2026 by Prof. Vijay Shankar Pasupureddi, Dean (Sponsored Research and Industrial Consultancy), IIT Bhubaneswar, and Dr. Laxmikant Palo, Chief Executive Officer, PPHF, in the presence of Prof. Shreepad Karmalkar, Director of the Institute. Among others, Prof. Animesh Mandal, Dean (Alumni, Corporate and International Relations) and Dr. Seema Bahinipati, Professor-in-Charge (Healthcare) were also present on this occasion.



The partnership will combine IIT Bhubaneswar's expertise in engineering, research and technology with PPHF's experience in public health and community engagement to address healthcare challenges.



The collaboration will focus on digital health, medical technology, low-cost diagnostics, biomedical engineering and primary healthcare, including AI-enabled healthcare solutions, telehealth and affordable diagnostics for non-communicable diseases, maternal health and nutrition. Joint initiatives will include implementation research, pilot projects and proof-of-concept solutions to improve healthcare access and delivery.

Both organisations will jointly identify priorities and pursue research partnerships, grants and CSR-supported programmes, with specific projects governed by separate agreements. The partnership reflects IIT Bhubaneswar's commitment to leveraging innovation for societal impact. PPHF is a not-for-profit public health organisation promoting locally driven, scalable and evidence-based healthcare solutions. The MoU will remain valid for three years.

IIT Bhubaneswar and Coratia Technologies Join Hands for Research in Underwater Communication and Robotics

IIT Bhubaneswar has signed a Memorandum of Understanding (MoU) with Coratia Technologies Private Limited on 26th October 2026 to promote collaborative research and technology development in underwater communication, underwater robotics and allied technologies.

The MoU was signed by Prof. Vijay Shankar Pasupureddi, Dean (Sponsored Research & Industrial Consultancy), IIT Bhubaneswar, and Shri Debendra Pradhan, Chief Executive Officer, Coratia Technologies Private Limited. Dr. Pravas Ranjan Sahu, Professor, Department of ECE, School of Electrical and Computer Sciences; Dr. Yogesh G. Bhumkar, Associate Professor and Dr. Satish Kumar Panda, Assistant Professor from School of Mechanical Sciences were also present on the occasion.



The collaboration will leverage IIT Bhubaneswar's research expertise in underwater acoustic communication and signal-processing technologies, alongside Coratia's expertise in the design and development of Unmanned Underwater Vehicles (UUVs) and Underwater Remotely Operated Vehicles (UWROVs).

The partnership will focus on developing high-data-rate and robust underwater communication systems, integrating communication modules with underwater vehicles, and undertaking joint technology development, prototyping, testing and field validation. The collaboration will also explore applications in underwater inspection, infrastructure monitoring, defence and security, marine exploration, disaster management and scientific research.

The MoU further envisages joint research projects, proof-of-concept development, access to testing and prototyping facilities, faculty and researcher interactions, student internships and project opportunities, and joint participation in government, defence and industry-sponsored research initiatives.

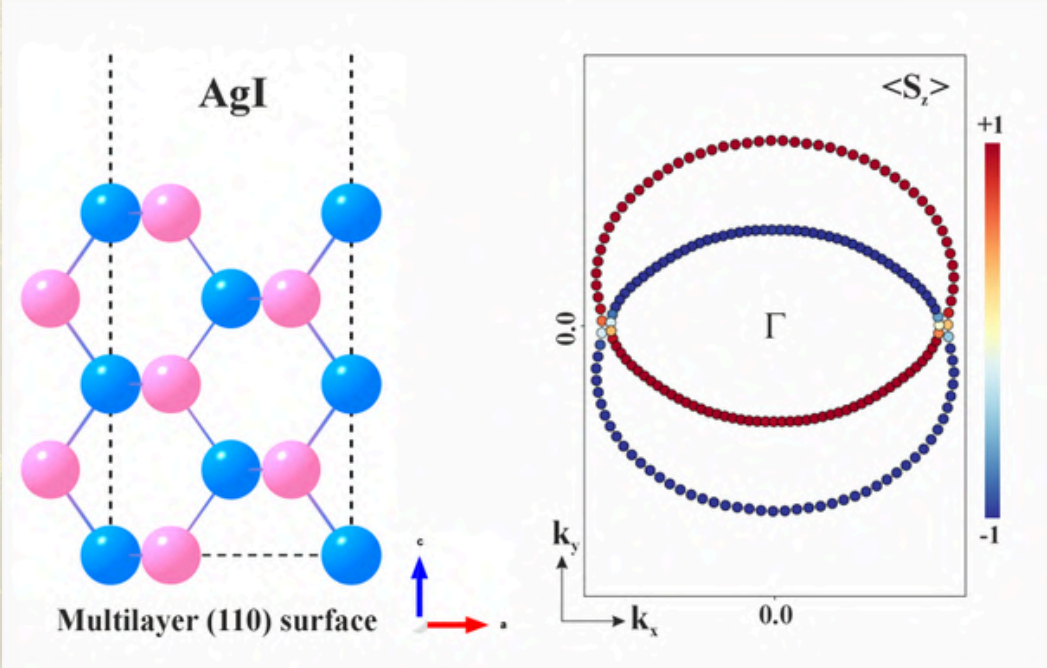
Through this partnership, IIT Bhubaneswar aims to strengthen industry–academia collaboration and contribute to the development of indigenous underwater technologies with potential applications in strategic, industrial and scientific domains.

IIT Bhubaneswar Researcher Predicts Potentially Infinite Spin Lifetime in a Nonmagnetic 2D Material

A new study identifies a specific surface of the cubic zinc- blende silver iodide (AgI) semiconductor as a promising host for persistent spin texture (PST) – an intriguing quantum phenomenon that holds immense potential for advancing next-generation electronic devices that utilizes the electron spin to process and store information. The research, led by Dr. Manish Kumar Mohanta, Ramanujan Faculty in the Department of Physics has been published in Physical Review B, a leading international journal in condensed-matter physics published by the American Physical Society.

Electrons possess an intrinsic property called spin, which can be exploited to carry information alongside their electric charge. In a certain nonmagnetic semiconductor, the electron spins exhibit a remarkably stable, unidirectional alignment, a phenomenon known as persistent spin texture (PST). This remarkable property makes such semiconductors promising candidates for next-generation spintronic devices, as it can suppress unwanted spin relaxation and enable the preservation of spin information over extended periods.

Using first-principles quantum mechanical simulations supported by mathematical models, Dr. Mohanta demonstrated that (110) surface of AgI exhibits a unidirectional spin pattern, highlighting its promise for future spintronic technologies. The study further reveals that the PST remains robust under moderate mechanical strain. However, an electric field applied perpendicular to the surface can disrupt the spin texture, potentially allowing the spin pattern to be manipulated electrically.

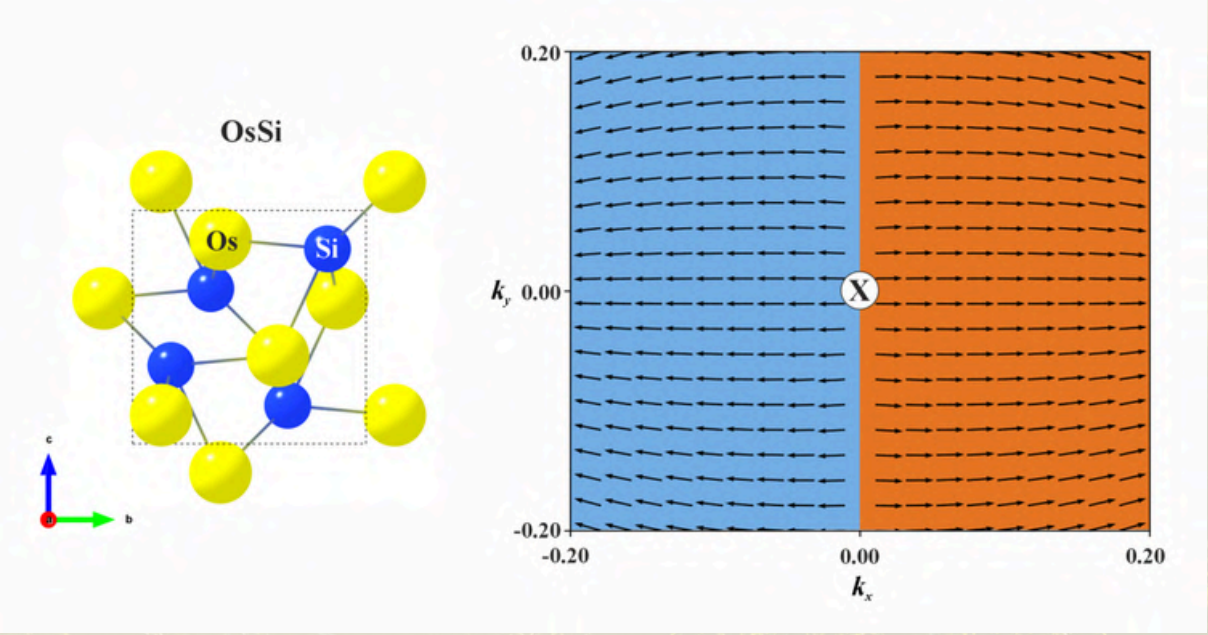


The figure illustrates the (110) surface of cubic zinc-blende AgI alongside its spin-projected Fermi surface, highlighting the persistent spin texture (PST) feature in its electronic structure.

A new study identifies a specific surface of the cubic zinc- blende silver iodide (AgI) semiconductor as a promising host for persistent spin texture (PST) – an intriguing quantum phenomenon that holds immense potential for advancing next-generation electronic devices that utilizes the electron spin to process and store information. The research, led by Dr. Manish Kumar Mohanta, Ramanujan Faculty in the Department of Physics at the Indian Institute of Technology (IIT) Bhubaneswar, has been published in Physical Review B, a leading international journal in condensed-matter physics published by the American Physical Society.

In this work, Dr. Mohanta also introduces two new mathematical model to explain the unusual spin pattern observed in the bulk semiconductor OsSi. The study also raises a fundamental question: Can a nonmagnetic bulk semiconductor exhibit a unidirectional spin pattern similar to that found in 2D materials? The central contribution of this research lies in developing new mathematical models that expand our understanding of electron spin patterns, offering new ways to describe, interpret and predict their behaviour in quantum materials.

For Dr. Mohanta, this study also marks an important milestone as his first independent research work since joining IIT Bhubaneswar as a Ramanujan Faculty. The research strengthens the understanding of behavior of spins in nonmagnetic semiconductors and provides a theoretical foundation for exploring materials that could support more efficient, spin-based electronic technologies.



The figure illustrates the (110) surface of cubic zinc-blende AgI alongside its spin-projected Fermi surface, highlighting the persistent spin texture (PST) feature in its electronic structure.

The research paper is available at: https://link.aps.org/doi/10.1103/6dcb-r2xb.

Cybersecurity Awareness Session as Part of National Cyber Security Awareness Month

IIT Bhubaneswar organised an interactive cybersecurity awareness session on 28th October 2026 as part of National Cyber Security Awareness Month, aimed at sensitising faculty members and staff to emerging cyber threats and promoting responsible digital practices.





The session featured Dr. Lingaraj Sethi, Cybersecurity Advisor, Cybercrime Investigator and Trainer, who shared insights into common cyber threats, evolving cyberattack techniques, social engineering tactics and real-world cybercrime incidents. Through practical examples and case studies, he highlighted how cybercriminals exploit human psychology, including trust, urgency, fear and curiosity, to deceive individuals.

The session also emphasised practical preventive measures, the importance of vigilance and informed digital behaviour, and the shared responsibility of safeguarding institutional and personal data.

Dr. Sudipta Saha, Chief Information Security Officer, IIT Bhubaneswar, coordinated the programme.

The initiative marks the beginning of a series of cybersecurity awareness programmes at IIT Bhubaneswar, with plans to extend the outreach to the wider institute community through interactive sessions and awareness resources.



IIT Bhubaneswar organises the Valedictory and Prize Distribution Ceremony of Hindi Pakhwada–2026

The Valedictory and Prize Distribution Ceremony of Hindi Pakhwada–2026, organised by the Official Language Cell of the Indian Institute of Technology (IIT) Bhubaneswar, was held on 30th October 2026. The programme was presided over by Prof. Shreepad Karmalkar, Director of IIT Bhubaneswar. Shri Bamadev Acharya, Registrar of the Institute, was also present on the occasion.

As part of Hindi Pakhwada–2026, the Official Language Cell organised six competitions for Hindi-speaking and non-Hindi-speaking participants to promote the use of Hindi and encourage its adoption as the Official Language. In addition, four competitions were organised for the students of the Institute. To further nurture students' interest in Hindi and encourage creative expression, a Hindi essay-writing competition was also organised for the students of Kendriya Vidyalaya, IIT Bhubaneswar.







During the ceremony, 67 participants who excelled in various competitions organised as part of Hindi Pakhwada were awarded with the prizes.

The programme was conducted under the guidance of Dr. Avijit Kumar, Professor-in-Charge the Rajbhasha Ekak, and coordinated by Shri Hemant Kumar Yadav, Hindi Translator.

The observance of Hindi Pakhwada–2026 was an important initiative towards promoting awareness and wider use of Hindi, encouraging creative expression in the language, and further strengthening the implementation of the Official Language policy at the Institute. The programme concluded on an enthusiastic and inspiring note.

IIT Bhubaneswar's Tech Zephyr 4.0 Concludes with 600+ Participants and ₹3 Lakh+ Prize Pool

Tech Zephyr 4.0, the annual techno-management festival of IIT Bhubaneswar, concluded on 1st November 2026. The three-day festival, held from 30th October, drew over 600 participants from institutes across India.

Inaugurating the fest, Prof. Shreepad Karmalkar, Director emphasized on critical thinking and urged students to think beyond textbooks. Prof. Mihir Kumar Das, Dean (Student Affairs), also addressed the students, encouraging them to enjoy the fest and make the most of every opportunity to learn and connect.







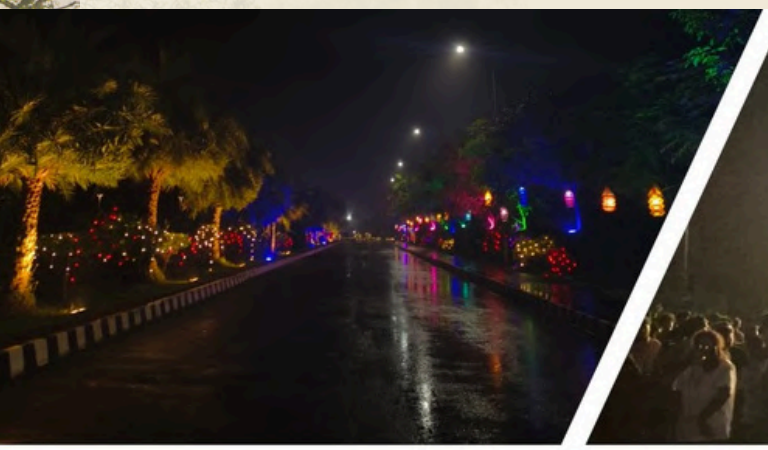
The fest featured ten competitions with a combined prize pool of over ₹3 lakh: ML Hackathon, Agentic AI Hackathon, Web Hackathon, CP Contest, CADathon, TurtleBot Pursuit & Evasion Challenge, Design Marathon, Math-O-Stellar, B-Plan Competition and Case Study Competition. The hackathons began on 31st October. A panel discussion on AI and Business showed students why business understanding matters alongside technical knowledge.



The event was cordially supported by Dr. Chetan, President, Students' Gymkhana, and Dr. Navjeet Bagga, Faculty Advisor, Science and Technology Council. Its success was driven by the constant support and enthusiastic workforce of the Science and Technology Council, Students' Gymkhana, IIT Bhubaneswar.















"Nature never did betray
the heart that loved her."

William Wordsworth



Picture Credit: Dr. Manas Jyoti Kashyop