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*Ask the right questions, and nature will open the door to her secrets
- Dr. C.V. Raman, The Nobel Prize in Physics 1930*

AI Powered Solutions to Make Indian Roads Safer to Drive

Ministry of Science & Technology reported that project 'Intelligent Solutions for Road Safety through Technology and Engineering' (iRASTE) at Nagpur would identify potential accident-causing scenarios while driving a vehicle and alert drivers about the same with the help of the Advance Driver Assistance System (ADAS). The project would also identify 'greyspots', i.e., by data analysis and mobility analysis by continuously monitoring dynamic risks on the entire road network. Therefore, Artificial Intelligence (AI) powered solutions to make roads in India a safer place to drive as unique AI approach is being implemented in Nagpur City with an objective of resulting in a significant reduction of accidents. What makes the iRASTE project even more unique is that AI and technology is being applied to create practical solutions, as a blueprint, for Indian conditions.

Researchers Found Ways for Broader Design & Engineering of Reconfigurable Magnonic Crystals

Indian researchers & scientists at S.N Bose National Centre for Basic Sciences, an autonomous institute of the Department of Science and Technology found ways for broader design & engineering of reconfigurable magnonic crystals by merging magnonics with "Artificial Spin Ice", that can transfer information more efficiently than electrons. Artificial spin ice (ASI) systems replicate the principles of the spin ice systems.

Team Avishkar Hyperloop Received Investment to Develop Innovations in the Hyperloop Landscape

Team Avishkar Hyperloop at the Indian Institute of Technology (IIT) Madras received investment from global pure-play engineering services provider L&T Technology Services Limited (LTTS) to develop innovations in the Hyperloop landscape. LTTS would further enable Team Avishkar to gain traction on its breakthrough disruptions in the emerging domain of Hyperloop based transportation solutions for futuristic commuting experience. The Hyperloop model proposed by Team Avishkar could achieve a top speed of over 1,200 kilometers per hour & it is completely autonomous, safe, and clean. The team is spearheading Hyperloop Tube research in India and has already patented a novel and cost-effective tube design.

Single National Portal 'BioRRAP' Launched for Biotech Researchers and Start-Ups

Ministry of Science & Technology launched the National Portal 'Biological Research Regulatory Approval Portal (BioRRAP)' for Biotech researchers and Start-Ups, which would help in ease of doing science, scientific research and ease of Start-ups in India. Further, the Portal BioRRAP would cater to those seeking regulatory approval required for biological research and development activity in the country as there are over 2,700 biotech start-ups and 2,500 biotech companies working at present in the country.

Special Update: IIT Mandi Developed New Powering System for IoT Applications

Internet of Things (IoT) is a collection of objects that can exchange data with each other through the Internet & devices range from ordinary household appliances in a "smart" home to sophisticated industrial and scientific tools, which are equipped with sensors, chips, and software that must be always powered and stay in communication with other devices. However, power sources such as batteries may not be suitable for them because some may be embedded or hidden, making changing batteries difficult. Therefore, Researchers at the Indian Institute of Technology (IIT)- Mandi developed New powering system for IoT applications, which has potential that includes applications such as battery-free wireless cameras, wireless monitors, sensors, skin-attachable sensing platforms, contact lenses, machine-to-machine communication, and human-to-machine interactions.