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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

IIT Madras established Centre for Responsible AI

To ensure ethical and responsible development of AI-based solutions in the real world, Indian Institute of Technology Madras (IIT Madras) established a Centre for Responsible AI (CeRAI), an interdisciplinary research centre. CeRAI is geared towards becoming a premier research centre at the National and International level for both fundamental and applied research in Responsible AI with immediate impact in deploying AI systems in the Indian ecosystem. One of the primary objectives of CeRAI would be to produce high-quality research outputs, such as publishing research articles in high-impact journals/conferences, white papers, and patents, among others. It would work towards creating technical resources such as curated datasets (universal as well as India-specific), software, toolkits, etc., with respect to the domain of Responsible AI. Google is the first platinum consortium member and has contributed a sum of US$ 1 Million for this Centre.

STPI Jaipur Created a State-of-the-art Incubation Centre of 20,000 sqft.

To cater to the growing needs of the IT and ITeS startups in Rajasthan, Software Technology Parks of India (STPI), Ministry of Electronics and Information Technology, Govt. of India created a state-of-the-art incubation centre of 20,000 sq ft at Jaipur. Jaipur is among the 10 top cities which provides a conducive environment for startups to scale up their operations. Jaipur STPI incubation centre would provides services like incubation, statutory assistance, office space and value added services like datacom, co-location services, PMC and other benefits. With the incubation centre, Jaipur is set to become a major hub of IT, ITeS startups.

C-DAC Transferred Indigenous Technology of Power Quality Solution and Railways VCU solutions to Industry Partners

Centre for Development of Advanced Computing (C-DAC), Thiruvananthapuram, Ministry of Electronics and Information Technology (MeitY), transferred Indigenous Technology of Power Quality Solution and Railways VCU solutions to industry partners. “The STATCOM (Static Synchronous Compensator) technology would help in integration of different renewable sources of energy to the grid without depleting power factor and could help the grid in unbalanced grid conditions. Also, the VCU and its offshoot technologies given to the Indian Railways would ultimately help the passengers, freight, Shatabdi and Tejas trains to have more indigenisation of the technologies. STATCOM is based on PQ standard-IEEE519 & IEEE1459 and has become increasingly relevant in recent years due to the growing demand for renewable energy sources which are intermittent and variable in nature.

CeNS Bangalore Designed & Developed Photonic Memory

Researchers from the Centre for Nano and Soft Matter Sciences (CeNS), Bangalore, an autonomous institution of the Department of Science and Technology (DST), Govt. of India, have designed and developed photonic memory that has multilevel capability for optoelectronic data storage applications. The new photonic, functional memory based on tin oxide slanted nanorod arrays in which both the optical and electrical stimuli could be used to modulate switching characteristics shows potential for developing high-density and high-efficiency computing systems. The research recently published in ACS Applied Materials and Interfaces could enable the design and development of photonic memories based on metal oxide nanostructures and help explore their potential applications in artificial visual memory and optoelectronics.

Special update: IIT Madras & DRDO Developed Sensor Technology for Underwater Communications

Researchers at the Indian Institute of Technology Madras and scientists of the Defence Research and Development Organisation (DRDO) developed a cutting-edge sensor technology for underwater communications that the Navy could apply. The indigenous technology would enable the fabrication of devices at a relatively lower cost as compared to international foundries, where not only is the cost of fabrication high but also the number of foundries is limited. Known as the piezoelectric MEMS technology it is needed to develop high-performance thin films. The fabricated PZT thin film-based acoustic sensor exhibits higher performance than the conventional PVDF-based acoustic sensor.