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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 Kanpur Unveiled New Insights Into the Process of Relaxation of Turbulent Binary Fluids

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Researchers at Indian Institute of Technology Kanpur (IIT-K), unveiled new insights into the process of relaxation of turbulent binary fluids in a new study published in the journal 'Communications Physics' by Nature Group. This significant research on binary fluids, referring to a mixture such as oil and water, challenges existing theories of turbulent relaxation and opens new avenues in the practical application of binary fluid dynamics in science, engineering and various industries. This discovery by the IIT Kanpur team has profound implications for understanding and manipulating the properties of such fluids in industrial applications.

IIT Madras Developed 3D-Printed Face Implants

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Researchers at the Indian Institute of Technology Madras (IIT) Madras developed 3D-printed face implants for patients suffering from Black Fungus, which has been reported in COVID-19 patients as well as those with uncontrolled diabetes, HIV/AIDS and other medical conditions. The Institute has partnered with ZorioX Innovation labs, a start-up founded by Dental Surgeons in Chennai, to implement this initiative, which is based on metal 3D Printing or additive manufacturing. Further extensive research activities are already being carried out to commercialise this technology for printing patient-specific implants in stainless steel, Ti-6Al-4V and Co-Cr-Mo alloys.

MeitY Launched State-of-Art AI Supported Telemedicine Mobile Clinic

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Ministry of Science & Technology (MeitY) launched state-of-the-art, Artificial Intelligence (AI) supported Telemedicine Mobile Clinic "Aarogya-Doctors on Wheels" for remote hilly areas of Ramnagar region in Udhampur district of J&K. The latest upgraded Tele Clinic is Artificial Intelligence-driven to provide healthcare facilities in far flung areas of the region, where such facilities are either not available or inadequately available. MeitY also added that the first phase of this facility was conducted in the far-flung Gandoh area of district Doda where it spent three months. The second phase was conducted along the Zero Line villages of the International Border, and the third phase was held in the upper reaches of Bilawar. The fourth phase in the next few months would be conducted in Dudu Basantgarh in the upper reaches of Ramnagar block of Udhampur.

IISc Researchers Found that the Ovarian Cancer Cells Could Spread More Easily in Tissues That Are Senescent or Aged

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Researchers at the Indian Institute of Science (IISc) in their study found that ovarian cancer cells could spread more easily in tissues that are senescent or aged because these tissues secrete a unique extracellular matrix that attracts the spreading cancer. Researchers used a chemotherapy-induced senescent model to study this phenomenon. They first extracted tissues found in the lining of body cavities from mice models and exposed half of these tissues to chemotherapeutics that are used to treat cancer, pushing them to senescence. The team also exposed both young and aged mouse tissues and human tissue-like cell sheets to ovarian cancer cells. They used time-lapse imaging to tag the normal and cancer cells with different fluorescent markers so that they could be studied under a microscope for extended periods of time

Special Update: IIT Madras Partnered With Altair to Launch eMobility Simulation Lab

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Indian Institute of Technology Madras (IIT Madras) partnered with the US-based Altair, a global technology company providing solutions in simulation, high-performance computing (HPC) and Artificial Intelligence (AI), to launch an eMobility Simulation Lab. The company has provided a financial support of \$1 million to the institute. Set up in the Department of Engineering Design, IIT Madras, the lab would have products and tools along with financial support from Altair. The lab would host Altair's modelling and simulation tools that will support the academic activities that IIT Madras would carry out in the other eMobility labs for Batteries, Charging, Power Electronics, Motors and Controllers and Vehicle Engineering, among other related areas.