NEST Newsletter (March 2021)

CSIR

- Union Minister for Health and Family Welfare, Science and Technology and Earth Sciences, Dr Harsh Vardhan **inaugurated the Centre of Excellence for Intelligent Sensors and Systems at CSIR-CSIO.** This facility will house the development of multi sensor systems based on Seismic, Acoustic, IR and UWB in the area of perimeter monitoring for societal and strategic applications using artificial intelligence and machine learning.

   https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1706477

- **India launched a 90-day scientific cruise mission in the second week of March to sample water, sediments, planktons and various organisms in search of genomes and micronutrients**, that may help strengthen country's research into commercial biotechnology applications including anticancer treatments as well as help understand new climate change patterns. CSIR-National Institute of Oceanography (NIO) has been commissioned to conduct genome and proteome mapping (micro nutrients) present inside single-cell organisms in the Indian Ocean.

   https://www.nio.org/news/106/india-set-to-kick-off-1st-project-to-map-genomes-in-indian-ocean

- In an attempt to make India self-reliant in manufacturing raw material for vaccines like adjuvants (which enhance the immune system) and other chemicals, **Hyderabad-based Bharat Biotech has tied up with the Council of Scientific and Industrial Research (CSIR) to work on technologies and platforms for novel vaccines, drugs, and even raw materials.**

   https://twitter.com/ravishni (Twitter account: @ravishni, Prof. R Ravishankar, CSIR-CDRI)

DoT

- During the address to High-Level Policy session of World Summit on the Information Society Forum (WSIS) 2021 where in Secretary General ITU, Ministers, leaders and high level dignitaries from across the globe were present, Shri Sanjay Dhotre Hon'ble Minister of State for Telecom, **underscored the role of Information and Communication Technologies(ICTs) for modernization and transformation of the industry, promotion of inclusive economic growth and stimulation** of the national economies to meet the larger objectives of Sustainable Development Goals (SDGs).

   https://www.pib.gov.in/PressReleseDetailm.aspx?PRID=1706649

- DoT is likely **to allocate more bands for the 5G spectrum** after requests from all telcos. The new move is expected to help telcos in rolling out 5G bands with less investment, which means consumers can avail services at affordable prices. Besides, the telecom ministry is likely to introduce a new spectrum policy in April, which will have all new bands like sub-1 GHz, 1-6 GHz, and millimeter wave bands.

  https://www.gizbot.com/telecom/news/dot-to-introduce-new-5g-bands-under-national-frequency-allocation-plan-073462.html

MeitY

- IIT Hyderabad, **Ministry of Electronics and IT (MeitY) and NXP India have joined hands to announce the launch of the first 'Semiconductor Startup Incubation and Acceleration Program'**. The programme aims to locate, facilitate, and mentor semiconductor and IP design start-ups in India in both, technological as well as business aspects.

  https://indiaai.gov.in/news/nxp-india-meity-fabci-launch-semiconductor-incubation-acceleration-program

- Mr. Ajay Prakash Sawhney, Secretary, MeitY, Government of India, while addressing the inaugural session of IndiaSoft-2021 International Exhibition and Conferences, organized by Electronics and Computer Software Export Promotion Council (ESC) **said that the public digital platforms being developed by India for healthcare, education, agriculture, matching jobs with skills, logistics etc would be launched soon.**

  https://orissadiary.com/india-to-launch-more-public-digital-platforms-shortly-secretary-meity/

- **Software Technology Parks of India (STPI) launched Apiary, a Centre of Excellence (CoE) in Blockchain at STPI incubation center**, Gurugram, in association with the Ministry of Electronics and Information Technology (MeitY), Government of Haryana, Government Blockchain Association and several blue-chip companies and top-tier academic institutions.

  https://twitter.com/stpiindia/status/1283614603105058817

NASSCOM

- IT industry lobby **Nasscom has launched a project to boost Indian deep-tech startups and help them scale globally**. A three-stage programme, Deep Tech Club (DTC) 2.0, is aimed at scaling the impact to over 1,000 firms that are leveraging technologies such as artificial intelligence (AI), machine learning (ML), Internet of Things, robotics and blockchain.

https://nasscom.in/sites/default/files/media_pdf/NASSCOM_Press_Release_NASSCOM_Launches_Deep_Tech_Club_2.0.pdf

- As digital innovation and adaptability become increasingly important to create a digital healthcare ecosystem, **NASSCOM FutureSkills PRIME has collaborated with Apollo Hospitals to launch a Joint Technical Educational Platform**. This "unique" collaboration will help in promoting multi-skilling and re-skilling along with enabling unlearning and re-learning to stay relevant, efficient, and productive.

  https://twitter.com/HospitalsApollo/status/1377512624867307524

- The Department of Information Technology Biotechnology and Science and Technology, Karnataka and industry body National Association for Software and Service Companies (Nasscom) **launched the Karnataka State policy for Engineering, Research and Development (ER&D), approved by the State cabinet**. The policy aims to foster innovation and increase multinational ER&D presence in the State by providing subsidies to global organizations looking to establish new R&D facilities or expand existing ones.

  https://www.business-standard.com/article/economy-policy/karnataka-govt-nasscom-launch-er-d-policy-to-foster-innovation-in-state-121030200945_1.html

- Nasscom **is launching an 'AI Gamechangers' program to promote artificial intelligence (AI)-led innovation in the country**. Microsoft is the innovation partner for the program and is part of the 'AI for India' mission, the program seeks to recognize impactful and scalable AI-based innovation in the country.

  https://nasscom.in/ai-gamechangers/

DRDO

- India is working to expand its military capabilities in space. For this purpose, the Defense Research and Development Organization (DRDO) **has developed new sensors and satellites along with ground stations to aid defense forces in space**. Work is in progress to **provide enhanced Signal Intelligence (SIGINT), Communication Intelligence (COMINT) and Electronic Intelligence (ELINT) capabilities** of the defense forces.

  https://www.indiatoday.in/india/story/india-military-capabilities-space-drdo-dsa-sensors-satellites-1784084-2021-03-26

- The DRDO **successfully conducted another test of the Solid Fuel Ducted Ramjet (SFDR) technology, which is crucial for the indigenous development of long range air-to-air missiles.

https://www.drdo.gov.in/press-release/drdo-conducts-successful-flight-test-solid-fuel-ducted-ramjet

- The **indigenous Air Independent Propulsion (AIP) System for submarine, which has been under development, has now reached the stage of maturity for fitment into target vessel** according to the DRDO.

  https://www.drdo.gov.in/press-release/fuel-cell-based-air-independent-propulsion-aip-system-crosses-important-milestone

- A **state-of-the-art Unexploded Ordnance Handling Robot (UXOR), designed by the DRDO, that can handle and defuse unexploded ordnance (UXOs)** — bombs, motors and missiles — up to 1,000 kg remotely from 1km Line Of Sight (LOS) is ready for technology transfer to private firms.

  https://timesofindia.indiatimes.com/india/robot-to-handle-unexploded-ordnance-ready-for-tech-transfer/articleshow/81731723.cms

- The road transport and highways ministry has **inked a pact with DRDO to utilize its expertise in providing sustainable measures to mitigate landslide and avalanche hazards on the national highways**. The pact is intended at utilizing the expertise of DRDO in providing sustainable landslide, avalanches and other geo-hazard mitigation measures on the national highways.

  https://www.morth.nic.in/memorandum-understanding-mou-between-drdo-and-morth-geo-hazards-mitigation-measures-national

HAL

- Indian firm Hindustan Aeronautics Limited (HAL) has announced that its Nashik Division completed production of 140 Su-30MKI jets from raw material stage (phase 4).

  https://www.airforce-technology.com/news/hal-140-raw-material-stage-su-30mki/

ISRO

- Speaking at the India Economic Conclave, **ISRO chief K Sivan said that India's human space mission Gaganyaan is likely to have a green propellant**. Stressing that ISRO wants to avoid all toxic and hazardous propellants, he said that the space agency is working towards using green fuel in all its future launches.

  https://www.hindustantimes.com/india-news/gaganyaan-india-s-human-space-mission-will-use-green-propulsion-isro-101616776504769.html

- **ISRO announced that it has successfully demonstrated free-space Quantum Communication over a distance of 300 m**. According to ISRO, this is a major milestone for unconditionally secured satellite data communication using quantum technologies. With this breakthrough, India joins a handful of other nations such as the US, the UK, Canada, China and Japan who have made significant contributions in the field of quantum communication.

  https://www.isro.gov.in/update/22-mar-2021/isro-makes-breakthrough-demonstration-of-free-space-quantum-key-distribution-qkd

- ISRO is **likely to launch the country's first solar mission later this year**. Named Aditya L-1, the mission was initially scheduled for launch in the first half of last year but was eventually delayed due to the Covid-19 pandemic.

  https://www.aerospace-technology.com/news/isro-solar-mission-india/

MoES

- Indian and Norwegian ocean scientists **will soon embark on a first-of-its-kind coastal mapping initiative to assess the scope of developing sustainable activities** supporting industry, fisheries, tourism and similar ocean-centric activities.

  https://mobile.twitter.com/moesgoi/status/1367404437065539589

- **India plans to conduct airborne radar surveys to estimate the thickness of Himalayan glaciers, with a pilot study to be conducted in Lahaul-Spiti basin of Himachal Pradesh.** Once the pilot project is done, similar studies will be conducted in Indus, Ganga and Brahmaputra sub-basins.

  https://pib.gov.in/PressReleseDetailm.aspx?PRID=1706074

MNRE

- The Power Sector Reforms program **will assist MNRE in integrating real-time data from the state portals of Gujarat and Haryana into the National Remote Monitoring Portal**, providing an overall picture of PM-KUSUM under one online platform. The data analysis will help understand best practices and gaps in implementation. The **platform monitors solar assets' real-time performance at a granular level using 'Internet of Things' (IoT)**. It tracks the overall progress made by the PS-KUSUM program and related subsidy disbursals digitally.

  https://mercomindia.com/mnre-remotely-monitor-solar-assets-under-kusum/

DEVELOPMENTS IN THE PRIVATE SECTOR

TECH-MAHINDRA

- Enate, a UK based Robotic Process Orchestration Solutions Company, **has announced a strategic partnership with Tech Mahindra**, a leading provider of digital transformation, consulting, and business re-engineering services and solutions. Together, Enate and Tech Mahindra will help global enterprises scale up their automation journey efficiently through Enate's proprietary Robotic Process Orchestration (RPO) technology. Tech Mahindra Ltd said it has launched 'CLOUDEFENDER', a new cloud-based attack mitigation service, to strengthen its cyber security portfolio.

  https://mybigplunge.com/tech-plunge/technology/tech-mahindra-ties-enate-deliver-intelligent-automation-global-enterprises/

- Tech Mahindra Ltd said it has **launched 'CLOUDEFENDER', a new cloud-based attack mitigation service, to strengthen its cyber security portfolio**.

  https://www.livemint.com/companies/news/tech-mahindra-bolsters-cyber-security-portfolio-with-cloud-based-solution-11616652814263.html

- Indian companies **Wipro and Tech Mahindra are collaborating with Finnish companies for development and expansion of 5G and 6G technologies** for use in India and other markets.

  https://www.livemint.com/technology/tech-news/wipro-tech-mahindra-collaborate-with-finnish-firms-to-develop-5g-in-india-11615911483533.html

RELIANCE

- Reliance Jio **launched an integrated technology solution JioBusiness to 'transform 50 million micro, small, and medium enterprises (MSMEs)**. Intended to bring efficiency in MSME operations and compete better with large enterprises, the solution included enterprise-grade fiber connectivity to offer voice and data services, digital solutions to help MSMEs manage and grow their business, and devices to enable digital solutions for such enterprises, according to the company.

  https://www.financialexpress.com/industry/sme/msme-tech-reliance-launches-jiobusiness-suite-of-tech-solutions-to-digitally-transform-50-million-msmes/2209316/

TATA GROUP

- **The focus for Tata Motors is to grab a slice of the pie of future-generation vehicles such as electric and hydrogen trucks**. - Girish Wagh, President, Commercial Vehicle Business unit, Tata Motors.

  https://www.moneycontrol.com/news/technology/auto/exclusive-tata-motors-in-talks-for-electric-mini-trucks-also-developing-hydrogen-tech-says-girish-wagh-head-of-commercial-vehicles-6648591.html

L&T

- Leading global pure-play engineering services firm L&T Technology Services Limited **announced that it has been selected as a Consulting and Professional Services (CPS) provider to support Amazon Alexa Voice Service (AVS) integration** in various connected devices spanning multiple domains and industries.

  https://www.livemint.com/companies/news/l-t-tech-to-do-consulting-for-amazon-to-support-alexa-s-integration-in-devices-11605848941587.html

ARTICLES/ EVENTS OF INTEREST

Observer Research Foundation (ORF)

Moderating online content in the United States Legislation - (Article by ABAGAIL LAWSON)

The attack on the U.S. Capitol in Washington DC by supporters of former President Donald Trump in January 2021 sparked a flurry of activity aimed at moderating online content in the United States.

https://www.orfonline.org/research/moderating-online-content-in-the-united-states/

Exploring the Promises and Perils of Chinese Investments in Tech Startups: The Case of Germany – (Article by SABRINA KORRECK)

China's tech giants and venture capital funds are making increasing amounts of investment in startups abroad. This brief investigates the scope of Chinese venture capital investments in German startups, analyses associated opportunities and risks, and outlines Germany's policy responses so far.

https://www.orfonline.org/research/exploring-the-promises-and-perils-of-chinese-investments-in-tech-startups-the-case-of-germany/

Rethinking the artificial intelligence race - (Article by MICHAEL DEPP)

Artificial intelligence (AI) has become a buzzword in technology in both civilian and military contexts. With interest comes a radical increase in extravagant promises, wild speculation, and over-the-top fantasies, coupled with funding to attempt to make them all possible.

https://www.orfonline.org/research/rethinking-the-artificial-intelligence-race/

Carnegie India

Space Is a Great Commons. It's Time to Treat It as Such. (Article by BENJAMIN SILVERSTEIN & ANKIT PANDA)

The failure to manage Earth orbits as a commons undermines safety and predictability, exposing space operators to growing risks such as collisions with other satellites and debris.

https://carnegieendowment.org/2021/03/09/space-is-great-commons.-it-s-time-to-treat-it-as-such-pub-84018

We must defend against the cyber threats facing our global financial systems - (Article by Tim Maurer and Arthur Nelson)
Today, the assessment that a major cyber-attack poses a threat to financial stability is axiomatic—not a question of if, but when. Yet the world's governments and companies continue to struggle to contain the threat because it remains unclear who is responsible for protecting the system.

https://edition.cnn.com/2021/03/14/perspectives/global-cyber-threat-imf-perspectives/index.html

Gateway House

India in the digital Lighthouse - (Article by Amrut Godbole and Sagnik Chakraborty)

In March 2021, the World Economic Forum (WEF) announced the addition of 15 manufacturing facilities to the prestigious Global Lighthouse Network. Two Indian companies were on the list – the Tata Steel facility in Jamshedpur, and the ReNew Power facility in Hubli. This is twice the number of Indian companies on the list last year. Many more facilities will likely be added to the WEF list, as several prepare to graduate their manufacturing businesses to keep up with Industry 4.0.

https://www.gatewayhouse.in/india-in-the-digital-lighthouse/

A model for global data regulation – (Article by Kartik Ashta)

Individuals now generate copious amounts of personal data everyday – both online and offline. Devices and infrastructure extract data, which can be shared instantly across borders with diverse entities - without consent. It is imperative that countries come

together to create regulations to protect individuals who are unable to control how their data is shared and processed. A model already exists in the Paris Climate Agreement.

https://www.gatewayhouse.in/a-model-for-global-data-regulation/

India needs space weather preparedness – (Article by Chaitanya Giri)

A 'whole-of-government' approach is needed to address the challenges of space weather on India's converging space and digital economies. A model lies in India's whole-of-government approach concerning disaster response and humanitarian assistance, evident in the response to natural disasters like earthquakes and preparatory work for cyclones, floods, and tsunamis. A space weather legislation, like the 2005 Disaster Management Act, can help India protect its global digital and telecom arteries, extending to outer space, from destructive solar storms and intense solar and galactic radiation whiplashes.

https://www.gatewayhouse.in/india-needs-space-weather-preparedness/

NITI Aayog

Net zero emission energy transition achievable by 2050: Niti Aayog CEO - (Article by V Rishi Kumar)

Niti Aayog CEO Amitabh Kant **reiterated the government's commitment to achieving 'Net Zero Emission' targets in energy by 2050**, even though it calls for a concerted strategy and massive investments. India needs a suitable policy and innovation driven context to deploy clean energy technologies on a massive scale. It requires more and faster deployment of large-scale solar, wind and hydro power to enable greater electrification. It also **requires the development of new fuels, such as liquid biofuels and biogas, as well as hydrogen produced from electrolysis**.

https://www.thehindubusinessline.com/economy/policy/net-zero-emission-energy-transition-achievable-by-2050-niti-aayog-ceo/article34141852.ece

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