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DRDO young scientist lab dedicated to AI research announced by PM Narendra Modi

By Sejuti Dass

Five DRDO Young Scientist Laboratories were announced by Prime Minister Narendra Modi in Bengaluru today which will focus on researches related to artificial intelligence, quantum technologies, and cognitive technologies. The Defence Research and Development Organisation (DRDO) Young Scientist Laboratories (DYSLs) are located in five cities, which are Bengaluru, Mumbai, Chennai, Kolkata and Hyderabad.

PM Modi stated, “In the field of defence manufacturing, DRDO will have to come up with new innovations to make India self-reliant. In promoting a Vibrant Defense Sector in the country, DRDO’s innovations have a huge role in strengthening Make in India.”

He further added, “India cannot be left behind by anyone. Investment on future technology is necessary and innovation is also necessary to protect our citizens, their borders and their interests.”

Narendra Modi also said that these labs would help in shaping the pattern of research and development in the field of emerging technologies in the country. Furthermore, he asked the scientists to prepare a definite roadmap for the new decade where DRDO should be able to set the direction and pace of scientific research in various fields in India.

Addressing the scientists, the Prime Minister said that India’s Missile programme is one of the outstanding programmes in the world. He also appreciated the Indian Space Programme and air defence systems.

Where the Five DRDO Young Scientist Labs Will Function

The establishment of the five DRDO Young Scientist Labs lays down the foundation for research and development of futuristic technologies. Each lab will work on key advanced technologies of importance to the development of futuristic defence systems, which are artificial intelligence, quantum technologies, cognitive technologies, asymmetric technologies and smart materials.

- Research in the area of rapidly evolving Artificial Intelligence will be carried out at Bengaluru.
- The all-important area of Quantum Technology will be based out of IIT Mumbai.
- The future is dependent on Cognitive Technologies and IIT Chennai will house the lab embarking in this area of research.
- New and futuristic area of Asymmetric Technologies, which will change the way wars are fought, will be based out of the campus of Jadavpur University, Kolkata.
- The research in the hot and critical area of Smart Materials and their applications will be based out of Hyderabad.

On behalf of DRDO fraternity, Dr G Satheesh Reddy, Chairman DRDO and Secretary, Department of Defence R&D, Government of India and Director General, Aeronautical Development Agency (ADA), thanked PM Narendra Modi for dedicating the Young Scientist Laboratories to the Nation.

<https://analyticsindiamag.com/drdo-young-scientist-labs-dedicated-to-ai-research-announced-by-pm-narendra-modi/>

Two city scientists to head new DRDO labs

Hyderabad: Two scientists working in the city's premier labs - Parvathaneni Shiva Prasad of the Research Centre Imarat (RCI) and Ramakrishnan Raghavan of the Defence Metallurgical Research Laboratory (DMRL) have been chosen to head the newly launched 'Young Scientists Laboratories' or DYSLs formed by the Defence Research & Development Organisation (DRDO) to start focused research in advanced technologies.

Prime Minister Narendra Modi had dedicated these labs to the nation on Thursday. And, as per the norms both the scientists are below 35 years of age and will be wholly independent directors of their respective labs akin to the existing heads of other DRDO labs.

Thirty-four-year-old Mr. Prasad, an alumnus of NIT-Rourkela and hailing from Khammam, has been selected as Director of the Asymmetric Technologies Lab based near IIT-Kharagpur will be specialising in nano-technologies, unmanned aerial vehicles, drones, cyborgs and so on with focus on low cost products. He is currently doing his Ph.D with the Indian Institute of Science, Bengaluru.



Mr. Ramakrishnan Raghavan, an alumnus of NIT-Trichy is also of the same age and has been appointed as Director of the Smart Materials Lab coming in the place of the existing Advanced Technology Centre of the DMRL up at Devathalagutta on the city outskirts and will be specialise in testing of armour piercing material, according to DRDO sources. He is pursuing research at IIT-Chennai.

Other DYSLs are located at Bengaluru - Artificial Intelligence, Quantum Technology - IIT Mumbai and Cognitive Technologies - IIT Chennai with each working on development of futuristic defence systems. The directors have been chosen by a committee chaired by Principal Scientific Advisor to Govt. of India K. Vijayaraghavan.

<https://www.thehindu.com/news/cities/Hyderabad/two-city-scientists-to-head-new-drdo-labs/article30463385.ece>

Gaganyaan astronauts to feast on chicken, pulao

B.R. SRIKANTH
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From dal, aloo parathas, chicken curry, pulao and almonds, the spread will be elaborate for Indian astronauts likely to journey into outer space as part of 'Gaganyaan' late next year or early 2022, but it will match the stringent quality control standards of NASA.

Indian astronauts will

savour a desi breakfast, lunch and dinner with a spread of 22 dishes and fruit juices — in all weighing 60 kg — and 100 litres of water provided by the Defence Food Research Laboratory (DFRL), Mysuru, instead of pasta and pizza. The spread has been chosen to suit the palates of Indian astronauts during their week-long sojourn in outer space.

"We have sent samples

(of all dishes and other eatables) to ISRO for tests with regard to palatability and other factors like zero microbes. Some of them will be tasted by the IAF pilots short-listed by ISRO for space flight, and the flavour will be modified to suit their taste buds," Dr Anil Dutt Semwal, director, DFRL, said on the sidelines of the 107th edition of Indian Science Congress in Bengaluru on

Friday.

He said food will be wrapped in special disposable packaging material to avoid microbes from entering the pouches. The eatables can be warmed using food warmers on board the spacecraft. "Every dish will be mildly spicy but we will provide extra taste makers if the astronauts want to eat highly spicy food," he added.

Dr Semwal said snacks such as nutrition bars, fruit juice powder, almonds and nuts would also be part of the food package.

Asked why the lab followed the standards set by NASA, and not Russia, where the pilots short-listed for the journey will be trained, he said the US space agency follows extremely stringent quality control standards.



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Indian-made Agni-V ICBM Intercontinental Ballistic Missile could enter in service in 2020

The latest generation of Indian-made nuclear-capable ICBM Inter Continental Ballistic Missile Agni-V could enter in service in 2020 after a few additional firing tests. On December 10, 2018, India has successfully test-fired its ICBM Agni-V, according to a statement from the Indian Ministry of Defense (MoD).

The last launch operations of the Agni-V were carried out and monitored by the Strategic Forces Command (SFC) in the presence of Scientists from Defense Research and Development Organization (DRDO) and other associated officials.

Development of the Agni-V began in 2008. The ICBM features indigenously designed navigation and guidance systems including a ring laser gyroscope based inertial navigation system.

According to Indian military sources, the Agni-V ICBM is a three-stage solid-fueled missile with an approximate range of 5,500-5,800 kilometers. The exact range remains classified, but it is assumed that the missile could have a range from 6,000 to 7,500 kilometers, and can carry a 1,500 kg nuclear warhead. India has reportedly also been working on multiple independently targetable reentry vehicles (MIRV) for the Agni-V in order to ensure a credible second-strike capability.

The Agni-V can be mounted on a launcher vehicle which is known as the Transport-cum-Tilting vehicle-5. It is a 140-ton, 30-metre, 7-axle trailer pulled by a 3-axle Volvo truck according to DRDO, Indian Defence Research and Development Organisation.

https://www.armyrecognition.com/january_2020_global_defense_security_army_news_industry/india-n-made-agni-v-icbm-intercontinental-ballistic-missile-could-enter-in-service-in-2020.html



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DRDO at 107th Indian Science Congress

Bangaluru: The Defence Research and Development Organization (DRDO) is participating in “Pride of India-Science Expo-2020” being held from 3-7 January at the 107th Indian Science Congress (ISC) at University of Agricultural Sciences, Bengaluru. The five-day mega science expo has been organized as part of 107th Indian Science Congress (ISC-2020) inaugurated by the Prime Minister Shri Narendra Modi. The DRDO pavilion at the expo was inaugurated today by the Union Minister of Science and Technology Dr Harsh Vardhan. He also visited various DRDO stalls and took a keen interest in the products and technologies displayed there. 31 DRDO laboratories with more than 150 exhibits and models are participating in the expo showcasing many cutting-edge indigenous defence technologies, which narrate the saga of Self-reliance & National Pride with the “Make in India” spirit. Star attractions of outdoor exhibits at DRDO Pavilion include the Long Range Surface-to-Air Missile (LRSAM), Quick Reaction Surface to Air Missile system (QRSAM), ASTRA Missile, Radars including Battle Field Surveillance Radar (BFSR), ASLESHA and BHARANI, MINI-UGV Autonomous Surveillance Robot, Sentry Autonomous Surveillance Robot etc.

Indoor exhibits include models from each technology cluster of DRDO. Some of them are AEW&C, UAV Rustom-I and Tapas, Nirbhay Missile, Akash Missile System, Prithvi missile, Nag missile, HELINA, Maareech – Advanced Torpedo Defence System, Bukhari-the heating system, Ready-to-Eat Packaged Foods, Juices etc. DRDO is the R&D wing of Ministry of Defence, with more than 52 laboratories and establishments mainly engaged in the development of weapon systems, platforms and equipment for the Armed Forces. DRDO pavilion at the Pride of India Expo has always been a major attraction amongst visitors & students. The visitors also get a chance to interact with DRDO scientists manning the stalls. DRDO welcomes one and all to its pavilion to get a first-hand account of capabilities of our nation in the area of advanced defence technologies and opportunity to share the pride of the vibrant DRDO community.

<https://www.5dariyanews.com/news/279714-DRDO-at-107th-Indian-Science-Congress>