

State-of-the-art infrastructure inaugurated by Hon'ble Minister of Education Shri Dharmendra Pradhan at IIT Hyderabad

This State-of-the-art infrastructure includes:

- ***Department of Materials Science and Metallurgical Engineering building based on Material Ages in Human Civilization, a part of Indo-Japan Collaboration through Japan International Cooperation Agency (JICA) and Ministry of Education (MoE)***
- ***Centre for Research and Innovation in AI (క్రియా), established with the support of JICA, MoE, and Honeywell Technologies***
- ***High-Performance Computing Centre, funded by Department of Science and Technology (DST) & Department of Electronics & Information Technology (Deity) with built-in collaboration with C-DAC***
- ***High-Resolution Electron Microscopy Facility, with the support from JICA & MoE***

Highlights:

- ***It will enable cutting edge research at the institute, a sturdy step towards Aatma Nirbhar Bharat***
- ***With these facilities of global standard, it will establish IITH among A-league facilities in the field of Materials Science & Metallurgical Engineering, AI & Cyber Security.***
- ***It is the first milestone achieved after the take-off of Phase-2 of the Campus Construction project supported by JICA.***

Hyderabad, August 18, 2021: It is a day to bookmark in the journey of IIT Hyderabad when the state-of-the-art infrastructure and facilities were inaugurated by Hon'ble Minister of Education Shri Dharmendra Pradhan at IIT Hyderabad; in the august presence of delegates from Japan, beloved BoG Chairman Dr BVR Mohan Reddy, Shri Jayesh Ranjan, IAS (PS, I&C and IT, GoT), Directors for DMRL, ARCI, RCI, IIITH, President-Honeywell, DG-CDAC, Secretary-DST, Secretary-Deity, Deans, HoDs, Faculty, Staff & Students of IIT Hyderabad. The infrastructure inaugurated today is a part of the campus development project under the broader India-Japan collaboration through the JICA.

Congratulating IIT Hyderabad on the occasion, Hon'ble Minister of Education Shri Dharmendra Pradhan added *"IITH is the first institute in the country to offer full-fledged BTech in AI in line with the recommendation of NEP 2020. I am glad to witness the unique collaboration IIT Hyderabad has with the Japanese organizations and Universities. It is an excellent example of international collaboration. I am confident with the recommendation of NEP 2020; such collaboration would become more common and further strengthen to achieve the goal of internalization at home. I congratulate IIT Hyderabad on this occasion and hope you will dream big, get the strength to pursue these dreams, and work towards realizing them"*

Speaking on this occasion, Mr. Shingo Miyamoto, Minister of Economic and Development, Embassy of Japan, said, *"IIT Hyderabad is the shining gemstone among innumerable projects Japan is having with India. From this cooperation, we want to see young engineers go to Japan, work here and learn from what we have in Japan and young Japanese talent to also visit Hyderabad and learn from you. I think the synergy the two countries have, is humongous and we want to capitalize it."*

Cherishing the moment, Prof B S Murty, Director IIT Hyderabad added, “It is indeed a momentous occasion to witness this development which will definitely lead to myriad technological developments and opportunities to serve the nation and society at large. The creation of some basic infrastructure facilities with Japanese design is a mark of friendship between India and Japan. The young and vibrant minds at IITH are all geared up to make the institute feature among Top 500 global institute soon.”

Brief about Department of Materials Science and Metallurgical Engineering Building

Today is a dream come true occasion for the Materials Science and Metallurgical Engineering (MSME) family where their imagination has taken the shape. MSME Building is the first academic departmental building at IIT Hyderabad with 14 state-of-the-art research & teaching labs having high-end instruments and several interaction-based classrooms and offices, enough to make them self-reliant in academics and research fields. The theme of the MSME building is based on Material Ages in Human Civilization. Having the motto of Atoms to Applications with the pledge to support the Aatma Nirbhar Bharat Abhiyan, over the years, the MSME family through their faculty, staff, and researchers have established in all aspects of Materials and Metallurgical research, successfully catering to various sectors like energy, healthcare, environment and so on. IIT Hyderabad, being a premier institute and surrounded by several industries and Government of India R&D labs, MSME foresees to be the research hub of Hyderabad in Emerging Materials Development & Technology. And the MSME building shall act as the focal point through the competent handholding of Prof B S Murty (a Professor of MSME and the Director of IIT Hyderabad).

Brief about High-Performance Computing Facility

The High-Performance Computing (HPC) facility of 650 Teraflops will be catering to the ever-increasing demands of computing for scientific and engineering research. The objective of this facility is to solve critical grand challenge problems of high National interest, ranging from the modelling of space/defense vehicles, cyber security, healthcare solutions, weather prediction, big data analytics, etc. by collaborating with the National laboratories, fellow academic institutions, government departments, industries, and emerging start-up companies. The supercomputing facility at IIT Hyderabad will be a symbiosis of computing, network, graphics, and visualization. The facility will house state-of-the-art hardware with the most efficient electrical, building, and thermal management systems, and host many in-house developed software tools. It will be conceived of as a functionally distributed supercomputing environment and connected by a powerful high-speed network.

Brief about Centre for Research and Innovation in AI (క్రియా)

IIT-Hyderabad launched the country's first BTech in Artificial Intelligence (AI) program and houses an exclusive Department of AI to offer its BTech, MTech, and PhD programs in AI, as well as to support interdisciplinary AI research. This effort has inspired many other institutions across the country to launch similar programs. IIT-Hyderabad also launched India's first NVIDIA AI Technology Centre last year, where researchers from both IIT-Hyderabad and NVIDIA work on AI projects for social good. To support the research activities of the AI department, a Centre for Research and Innovation in AI (క్రియా) is now being established with the support of JICA and Honeywell. This AI క్రియా Centre in addition to seating areas, classrooms, and conference rooms for researchers house a mini-data centre with high-end computational facilities to meet the ever-increasing demand of researchers associated with the AI department at IIT Hyderabad. With various GPU servers and the deep learning supercomputers NVIDIA DGX1 and DGX2, the data centre supports up to 250 TFlops of GPU computing power. This centre will be used by faculty, research staff, and students at IIT Hyderabad to carry out state-of-the-art AI research in-house, as well as in partnership with its collaborators in government and the industry.



Brief about High Resolution Electron Microscopy Facility

The HR-S/TEM facility recently commissioned at IIT Hyderabad, JEOL JEM-F200 TEM is India's first cold-field emitter TEM, operated at 200 kV. This microscope is a multipurpose analytical S/TEM equipped with EDX and STEM detectors enabling atomic resolution imaging as well as compositional mapping. This along with the FIB-SEM, JEOL JIB 4700F makes it possible to carry out site-specific specimen preparation of most inorganic materials with ease. This combination unlocks an entirely new perspective of understanding materials at not just the atomic resolution but also in 3-dimensions. We aim to establish IIT Hyderabad as not only an active participant in the electron microscopy hub of Hyderabad but also as a key microscopy facility in the country. We envision this as a key first step in establishing IIT Hyderabad on the international map of microscopy.

The virtual event can be viewed live at <https://www.youtube.com/watch?v=82eK68Lov5A>

About IIT Hyderabad

Indian Institute of Technology Hyderabad (IITH) is one of the eight new IITs established by the Government of India in 2008. In a short span of **12** years, the institute has become a top ranker and currently has **243** full-time faculty, **3,397** students (**20%** women), and nearly **200** state-of-the-art laboratories, and five research and entrepreneurship centers. The institute has a strong research focus with more than Rs **575** crore of sanctioned research funding with PhD scholars accounting for about **30%** of total student strength. IITH has to its credit more than **6000** research publications, **195** patent disclosures, **1440** sponsored/consultancy projects, and about **50** startups.

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