

# PARAM PORUL SUPERCOMPUTER INAUGURATED AT NIT, TIRUCHIRAPPALLI

Relevant for: Science & Technology | Topic: Computer Technology incl. 3-D Printing

PARAM PORUL, a state-of-the-art Supercomputer at NIT Tiruchirappalli dedicated to the nation under National Supercomputing Mission (NSM) - a joint initiative of Ministry of Electronics and Information Technology (MeitY) and Department of Science and Technology (DST), was inaugurated on May 25, 2022 by Shri Bhaskar Bhat, Chairperson Board of Governors, Tiruchirappalli in gracious presence of Prof. G. Aghila, Director, NIT Tiruchirappalli; Shri E Magesh, Director General, C-DAC, Shri Naveen Kumar, NSM- HPC Division, MeitY; Shri S A Kumar, Advisor, NSM, MeitY, Dr. Hemant Darbari, Mission Director- NSM, Dr Namrata Pathak, DST; Dr. Nagaboopathy Mohan, DST, Shri Sanjay Wandhekar, Senior Director, C-DAC, along with senior officials from MeitY, DST, NIT Tiruchirappalli and C-DAC. PARAM PORUL supercomputing facility is established under Phase 2 of the NSM, where in majority of the components used to build this system have been manufactured and assembled within the country, along with an indigenous software stack developed by C-DAC, in line with the Make in India initiative.

A Memorandum of Understanding (MoU) was signed between NIT Tiruchirappalli and Centre for Development in Advanced Computing (C-DAC) on 12<sup>th</sup> October 2020 to establish this 838 TeraFlops Supercomputing Facility under NSM. The system is equipped with a mix of CPU nodes, GPU nodes, High Memory nodes, High throughput storage and high performance Infiniband interconnect to cater the computing needs of various scientific and engineering applications. PARAM PORUL system is based on Direct Contact Liquid Cooling technology to obtain a high power usage effectiveness and thereby reducing the operational cost. Multiple applications from various scientific domains such as Weather and Climate, Bioinformatics, Computational Chemistry, Molecular Dynamics, Material Sciences, Computational Fluid Dynamics etc. has been installed on the system for the benefit of researchers. This high end computing system will be a great value addition for the research community.

NIT, Tiruchirappalli has been carrying out research in the areas of societal interest such as Health, Agriculture, Weather, Financial Services. The facility installed under NSM will strengthen this research. The new high-performance computational facility would aid researchers to solve large-scale problems of different fields of Science and Engineering.

A portion of the total compute power shall also be shared with the nearby academic and research institutes as per the mandate of NSM. Further, NSM has sponsored a number of application research projects using this Supercomputing facility involving researchers for and other Indian institutes and industries. Overall, this Supercomputing facility will provide a major boost to the research and development initiatives in Indian academia and industries to reach a position of global esteem.

Under NSM, till date 15 supercomputers have been installed across the nation with compute capacity of 24 petaflops. All these supercomputers have been manufactured in India and operating with indigenously developed software stack.

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**RKJ/M**

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