



Department of Computer Science & Engineering

Technical Specifications of *PARAM Shavak* – A High Performance Computing Facility

2 X Intel Xeon Scalable Processors with minimum 18		
Cores each of minimum 2.2 GHz Clock Speed with		
Max. capacity of 10.4 TFLOPS		
96 GB ECC (8GBX12) DDR4 2400 MHz		
4 X 4TB SATA – 3.5" 7200 RPM with Hardware RAID		
Controller (1GB Cache)		
Nvidia Quadro P400		
Two 1GbE network port		
2X16 PCI-E Gen3 Slots for GPU/Co-processors		
RHEL		
1 X NVIDIA GP100		
ONAMA – A set of Library for HPC in the disciplines		
like Computer Science, Mechanical, Civil, Electrical,		
Electronics, Chemical		
CHReME – An HPC Resource Management Engine		
Intel Software Development Suite		



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Faculty of Technology & Engineering

The M S University of Baroda

Research Projects Carried on Super Computer

Sr. No.	Project	Institute/Organization	Status
1	Study of New Enzyme Inhibitors for Drugs designing in the Pharmaceutical Sector using GROMACS Software	Dr. Prashant Murumkar, Assistant Professor, Faculty of Pharmacy, The M S University of Baroda	Completed
2	The Great Internet Mersenne Prime Search is a collaborative project of volunteers who use freely available software to search for Mersenne prime numbers. This project was started in 1996 by George Woltman and is still going on.	Jainam Shah, BE Student, CSE Department, Faculty of Technology & Engineering, The M S University of Baroda	Completed. According to Henri & Renaud Lifchitz's PRP Top record this probable prime has rank 9380 in terms of number of digits as on 31st August 2021. All over the world, Production score wise it ranks 120 and based on number of prp it ranks 150 among discoverers. (Second Person from India)
3	Moodle Facility for the 40000+ students of the university. To conduct online classes and exams, study material, attendance management in this COIVD-19 situation.	The M S University of Baroda	Completed

4	"Understanding the role of MeCP2 in the progression of Glioblastoma via various Post- Translational Modifications: Insilco and Invitro approach"	Hetvi Shah (PhD Scholar) Division of Neurobiology, Department of Zoology, Faculty of Science, The Maharaja Sayajirao University of Baroda	Completed
5	Calculating more precise value of PI	Prof. Hirabhai Vankar (Retired Professor of Mathematics)	On Going, Conceptual paper has been communicated.
6	Ph D Research Work	Jyoti Sohoni, PhD Scholar, Electrical Engineering Department, Faculty of Technology and Engineering, The M. S. University of Baroda	On Going
7	Abaqus FEA calculation	Mr. Chirag Patel, CEAT, Vadodara	On Going
8	Plant Leaf Disease Detection using Deep Learning	Ms. Barkha Joshi (Ph D Scholar), CSE Department, Faculty of Technology & Engineering,	On Going
9	Transcriptome Analysis of Taverniera Cuneifolia	Mr. Talib Momin (Ph D Scholar), Botany Department, Faculty of Science, The Maharaja Sayajirao University of Baroda	On Going
10	Deep learning based Diabetic Retinopathy	Bhumi Shah, VIER, Kotambi, Vadodara	To be commenced

Prof. Apurva Shah Coordinator Dr. Vishwas Raval Co-Coordinator