

Central Computer Centre, NIT Calicut

Central Computer Centre (CCC) is the computing facility of NIT Calicut which caters to the requirements of the whole community of this institution. The Centre has state of the art infrastructure with 200+ client machines and has a capacity to include 400+ machines. Client systems are of both desktop and workstation genre. Work stations are capable of handling high end CPU intensive simulations. CCC also hosts some of the high end servers and a High-Performance Computing Cluster of 20 Tera FLOPS computing power, which meets the research needs of the institute. Several post graduate, Ph. D and under graduate students (with compute intensive projects) and faculty are using this facility for research activities.



NITC and Calicut city

National Institute of Technology Calicut (NITC), is fully funded by MHRD, Govt. of India and is governed by the NIT Act 2007. The Institute has ten departments, three schools and nine research centers. It offers ten UG, and thirty PG programmes along with the Ph.D programme in various fields of Science, Technology and Engineering.



Calicut (Kozhikode), the historical “City of Spices”, is a fast growing, predominantly urban region in the northern part of Kerala. Calicut proudly hosts many institutions of national eminence like NITC, IIMK, NIELIT, CWRDM, Kerala School of Mathematics and IISR. Calicut is well connected by rail/road/air to major cities in India. NIT Calicut is 21 kms from Kozhikode Railway Station, towards the east.

TEQIP-II SPONSORED Faculty Development Programme On High Performance Computing - Latest Trends and Application

9th March to 11th March 2017



Co-coordinators:

**Dr. P. B. Jayaraj
Dr. P. Parameswaran
Dr. Raghu Chatanathodi**

Organized by

**Central Computer Centre
National Institute of Technology Calicut
NIT Campus P.O., Calicut**

About the Programme

Central Computer Centre of NIT Calicut along with Departments of Computer Science and Engineering, Chemistry and Physics is conducting a FDP on "High Performance Computing – Latest trends and Applications", under TEQIP-II at NIT Calicut, from March 9-11, 2017 (3days). The program aims to bring the latest ideas in supercomputing, in terms of hardware, software and methodology to faculty and researchers who use High Performance Computing (HPC) machines for their research or are interested to develop or advance research in this area.

For more than a decade, computational simulation, as empowered by HPC, has been emerging as a game changing tool in almost all research areas of science and technology. The role of HPC in advancing education and research is vital. Need for systems and materials with tailored properties like energy and cost efficiency, environmental compatibility and user friendliness has pushed up the idea of computational design of systems and materials to the forefront of research. As this field advances at a high pace, with developments such as GPU based computing and co-processor applications, researchers in technical institutions including faculty and research scholars need to grasp the possibilities offered by these tools to their research and new ways of generating computed data and managing these. This

workshop will introduce faculty and researchers from technical institutions to the latest trends and give glimpses into how these techniques and the technology can be applied to their own research problems. It can also give an incentive to solving problems in research through new computational approaches, making solutions possible in area where previously it was impossible to compute with available resources. This program will generally introduce technology and codes available to researchers in allied or interdisciplinary area like materials sciences, mechanical engineering, bio-informatics and computational chemistry to use for their research.

Course Contents

The topics to be covered include:

- Introduction to parallel computing
- Design of HPC architectures
- Introduction to MPI & Open MPI
- GPU based parallel computing
- Parallel programming using Xeon Phi co-processor
- Applications of HPC to bio-informatics, drug design, chemistry, physics and fluid dynamics

Resource Persons

Experts from academia and industry such as IISc, IITs, Intel, Nvidia and CDAC will be delivering lectures, demo-sessions and practical sessions.

Eligibility

PG students, Ph. D scholars and faculty who work in the area of computational research are eligible to apply.

Registration

Participants can register by filling the online form available at the link <https://docs.google.com/a/nitc.ac.in/forms/d/e/1FAIpQLScaNobl-IX8sBNWUrGueAWbG8pgCetGGsjQFILMDvRM49O5vQ/viewform?c=0&w=1> The last date for submitting the form is 25th Feb 2017. The number of participants shall be restricted to sixty. All the selected participants will be informed through e-mail on or before 1 March, 2017. Number of outside participants is limited to ten. Non refundable token fee of Rs. 2,500/- for course materials and laboratory for students and Rs 5000/- for course materials, boarding and lodging of faculty will be collected from outside participants.

Accommodation

Limited accommodation will be provided in the NITC campus for outside participants. A request for this has to be made well in advance. No TA/DA will be paid for any participant.

For further details, contact:

Dr. P. B. Jayaraj

Coordinator, FDP HPCLTA

Central Computer Centre, NIT Calicut
Calicut, 673601, Kerala, India

Email: jayarajpb@nitc.ac.in

Phone: 0495-2286822, Mob:+91 9633701066