

FACULTY DEVELOPMENT PROGRAM

on

"High-Performance Computing and Deep Learning"

Under the aegis of

Electronics & ICT Academy

IIT Roorkee



Oct. 21-25, 2018

Experts from Academia/Industry

Dr. P. Sateesh Kumar **Dr. S Chickerur**
IIT Roorkee Head, Centre for HPC

Mr. Bharat Kumar
Nvidia



Supported by

**Ministry of Electronics & Information
Technology**
Government of India

Venue



**Indian Institute of Technology
Roorkee**

Why HPC and Deep Learning?

In recent years, major breakthroughs were achieved in different fields using deep learning. From image segmentation, speech recognition or self-driving cars, deep learning is everywhere. Performance of image classification, segmentation, localization have reached levels not seen before thanks to GPUs and large scale GPU-based deployments, leading deep learning to be a first class HPC workload. In this course, after a short introduction to Deep Neural Networks on GPUs, participants will learn how to use NVIDIA's platform for deep learning and how new advances in hardware and software integrate in large-scale computing environments.

Objective of the Course

The objective of this course is to create expert in field of HPC by exposing the scientific researchers with hands-on training in HPC and provide background in parallel computing which is now a necessity to extract best performance from latest computer architecture. This training will also expose the applicants with convergence of HPC with Artificial Intelligence which is the new era of research in scientific computing.

Program Features

- The program is split into lectures and labs/hands-on sessions.
- Hands-on experience on basic and advanced-level topics.
- Interaction & learning with experts from academia & industry.
- Certificates to participants by E&ICT Academy IIT Roorkee.

Focus Areas

- Introduction of Deep learning and Image Classification.
- Introduction of Object Detection, Neural Network Deployment.
- Flynn's Taxonomy.
- Hands-on session on OpenMP, MPI, and Open ACC.
- CUDA C Programming Model.
- Convergence of AI and HPC.
- Introduction to Heterogeneous Computing.
- GPU Architecture.
- Ways to GPGPU Programming.



Benefits and Outcomes of the Course

- Hands-on exposure to HPC.
- Work with HPC expert to accelerate local codes.
- Exposure to Convergence to HPC and AI.
- Instructor led workshop on latest techniques across variety of application domain

Coordinator

Dr. Sanjeev Manhas
Principal Investigator
E&ICT Academy
IIT Roorkee

Dr. P. Sateesh Kumar
Course Coordinator
E&ICT Academy
IIT Roorkee

Who Can Attend ?

Program is open to faculty members/research scholars/PG students from colleges/universities, and industry personnel working in the concerned/allied discipline.

Registration Fee

Faculty members: ₹ 2,500/-

Research scholars: ₹ 2,500/-

Persons from Industry: ₹ 3,000/-

Payment Details

DD in favor of "Dean SRIC IIT Roorkee" payable at Roorkee
"OR"

Make Online Payment by NEFT/RTGS on given detail

Account Name: Research Project, IIT Roorkee

Account Number: 33012172097

IFSC code: SBIN0001069

How to Apply

Step 1: Participants may fill the registration form available on the link "Apply Here" for the relevant course on eict.iitr.ac.in

Step 2: Make Payment

OR

Step 3: Send a duly filled-in registration form along with Demand Draft to Academy address.

Mr. Prateek Sharma, EICT Academy, ECE Department, IIT Roorkee-247667

Important Dates

**Last Date For Online
Registration :
October 15, 2018**

EICT Academy IITR

Electronics and ICT Academy (E&ICT) at IIT Roorkee (funded by Ministry of Electronics and Information Technology) aims to enrich and upgrade teaching and research competences of engineering faculties of institutes/colleges by conducting courses and workshops in fundamentals as well as emerging areas of E&ICT and enabled areas. The programs are conducted by well-known industry partners, resource persons from leading academia and experts from renowned R&D organizations.



Activities of the Academy

- Specialized training on basic and advanced level topics with hands-on experience in the emerging areas of Electronics & ICT.
- Setup the activity centers to conduct FDPs locally at institutes/colleges.
- Curriculum development for the industry.
- Continuing Education Programme for students/working professionals.
- Design, develop and delivery of specialized modules for specific research areas in industry.

Faculty Development Program

on

High-Performance Computing and Deep Learning



REGISTRATION FORM

Applicant Name _____

Gender: _____

Category (GEN/OBC/SC/ST): _____

Designation: _____

Name and Address of the
Organizatio/Institute: _____

City/Town: _____

Email: _____

Phone Number: _____

Do you need Accommodation?
(Yes/No): _____

DD Number: _____

Date: _____

Issuing Bank: _____

Payable at: _____

Signature of the Applicant

Contact Us

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