

**National Workshop on  
GPU Programming and Applications  
(GPA3-2014), IIT Guwahati**

Name: Dr/Mr/Ms/Mrs. \_\_\_\_\_

Designation: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Pincode: \_\_\_\_\_ Phone: \_\_\_\_\_

Mobile: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Fee payment Details:

Draft No: \_\_\_\_\_ Dated: \_\_\_\_\_

Amount: \_\_\_\_\_ Bank: \_\_\_\_\_

Signature of the Candidate with Date

**Important Dates:**

Last date of registration: **08<sup>th</sup> Sep, 2014**

Duration of program: **12<sup>th</sup> -14<sup>th</sup> Sep, 2014**

**After the completion of this training  
program the participants will**

1. Be exposed to computational thinking skills for accelerating applications in science and engineering.
2. Understand the most important architectural performance considerations for developing parallel applications.
3. Be able to design algorithms that are appropriate for accelerators.
4. Engage computing accelerators on science and engineering breakthroughs.

**Program Contents**

**The training program delivers the following  
key concepts to the participants:**

1. Why Supercomputing?
2. Introduction to Parallel Computing
3. Introduction to GPU Computing
4. CUDA Architecture and Programming model
5. CUDA Best practices
6. CUDA Profiling and debugging tools
7. CUDA Optimizations
8. Case Studies from different Application Domains

**Pre-requisites**

Participants must have a sound knowledge of C, C++ programming. Participants, who are going to participate in CUDATHON (Programming Contest), are required to bring their own laptops.

**भारतीय प्रौद्योगिकी संस्थान  
गुवाहाटी  
Indian Institute of Technology Guwahati**

**National Workshop on  
GPU Programming and Applications  
(GPA3-2014)**



**Hands on Lab Sessions on  
CUDA  
& Programming Contest**

**“CUDATHON”**

**Organized by  
IIT Guwahati  
CUDA Center of Excellence, IIT Bombay  
CDAC, Pune  
NVIDIA Corp.  
Cepstrum, IIT Guwahati**

*For Details Visit us at [www.iitg.ac.in](http://www.iitg.ac.in)*

## About GPA3-2014

NVIDIA Corporation, USA has recently designated IIT Guwahati as a CUDA Teaching Center (CTC). IIT Guwahati, CUDA Center of Excellence (CCOE) of IIT Bombay, C-DAC, Pune and NVIDIA Corporation, are jointly conducting the Third National Level Workshop on GPU Programming and Applications (GPA3-2014) during 12<sup>th</sup>-14<sup>th</sup> September 2014 at IIT Guwahati.

GPA3-2014 is a three day workshop on heterogeneous parallel computing. GPA3-2014 is aimed at enriching the skills of students, faculty and researchers with cutting-edge techniques and hands-on experience in developing applications for many-core processors, with massively parallel computing resources like GPU accelerators.

## Workshop Objectives

1. Introduce techniques/ tools available based on NVIDIA's CUDA environment.
2. Enable participants to quickly get started with writing their own parallel codes on GPGPU.
3. Provide hands-on experience in parallel programming.
4. These special sessions will provide the rich hands-on experience with various languages and tools covered in the lectures.
5. They comprise a brief introduction to the programming assignments, followed by independent work periods.
6. To help with the assignments, teaching assistants will be available in person and via the web.
7. Present case studies from different application domains.

## Invited Speakers

- **Prof. Gautam Biswas**  
*Director, IIT Guwahati*
- **Prof. P.S.V. Nataraj**  
*CUDA Center Of Excellence, IIT Bombay*
- **Prof. S. Gopalkrishnan**  
*CUDA Center Of Excellence, IIT Bombay*
- **Dr. V.C.V. Rao**  
*CDAC, Pune*
- **Mr. Ashok Chaudhary**  
*IIT Bombay*
- **Dr. Pushan Majumdar**  
*IACS, Kolkata*
- **Dr. Shubra Ghosh Dastidar**  
*Bose Institute, Kolkata*

## IIT Guwahati Speakers

- **Prof. Jiten Kalita**  
*Professor*  
*Department of Mathematics*
- **Dr. Vibin Ramkrishnan**  
*Assistant Professor*  
*Department of Biotechnology*
- **Dr. Aryabartta Sahu**  
*Assistant Professor*  
*Department of Computer Science*
- **Dr. Deepak Sharma**  
*Assistant Professor*  
*Department of Mechanical Engg.*

## Target participants

Faculty members, students (UG/PG/PhD) and participants from industry.

## Registration Fee

Industry participants: INR 4500/-  
Faculty: INR 3500/-  
Students: INR 2000/-

*Registration fee includes registration kit, lunch and refreshment for three days only.*

## Payment mode

The Registration form in the prescribed format, along with non-refundable DD drawn in favour of "**REGISTRAR, IIT GUWAHATI**", payable at **GUWAHATI**, to be sent to the above mentioned contact address on or before **08<sup>th</sup> Sep 2014**.

## Organizing Committee

Patron:

Prof. Gautam Biswas

Directors:

Prof. P.S.V. Nataraj  
Prof. S. Gopalakrishnan  
Dr. V.C.V. Rao  
Dr. Gaurav Trivedi  
Mr. Manish Bali

Advisors:

Prof. Ratnajit Bhattacharjee  
Prof. Sukumar Nandi  
Prof. Shivashankar B. Nair  
Prof. Bhaba Kumar Sarma  
Prof. Diganta Goswami

Members:

Dr. Rohit Sinha  
Dr. Kalpesh Kapoor  
Dr. Praveen Kumar  
Dr. Aryabartta Sahu

## Address for Correspondence

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