

## Electronics and ICT Academy at National Institute of Technology Patna

Setup under Scheme of

Department of Electronics and  
Information Technology, (DeitY)  
Ministry of Communications and IT,  
Govt. of India

Proposes  
Expert Lectures Series  
on  
Distributed Systems

Duration: 1/06/2016 to 5/06/2016



### Chief Investigator

Prof. (Dr.) Asok De, Director  
NIT Patna

Coordinators:

Dr. Akshay Deepak\*

Dr. Dinesh Dash\*

### About NIT Patna

National Institute of Technology Patna is the 18<sup>th</sup> National Institute of Technology created by the Ministry of H.R.D. Government of India after rechristening the erstwhile Bihar College of Engineering Patna on 28. 01. 2004. The institute has highly qualified faculty of higher caliber in various disciplines. Institute offers B.Tech, M.Tech & Ph.D. programs in respective field of Engineering, National Institute of Technology Patna aims at setting out very high education standards and holds long record of academic excellence. Sciences and Technology with well-equipped laboratories.



### About Electronics and ICT Academy

DeitY has sponsored a scheme entitled "Scheme of Financial Assistance for setting up of Electronics and ICT Academies". The objective of the above scheme is to set up seven (07) Electronics and ICT Academies as a unit in IITs, NITs, and IIITs etc. for faculty/mentor development/up-gradation to improve the employability of the graduates/ diploma holders in various streams, through collaboration of States/Union Territories with financial assistance from the Central Government. Electronics and ICT Academy would aim to provide specialized training to the faculties of Engineering, Arts, Commerce &

Science colleges, Polytechnics etc., by developing state-of-the-art facilities. The Scheme has been approved on 14.11.2014. Subsequently, an Empowered Committee under the chairmanship of Secretary, DeitY has accorded approval for setting up Academy in NIT Patna (Bihar).

### Course Objective

The objective of this course is to familiarize participants with theoretical and practical concepts of Distributed Systems.

### Topics Covered

- Motivation: What is a Distributed System, and why is it important?
- Communication Models
- Time in a Distributed System – Causality, Logical Clock, Vector clock
- Correctness criteria: Liveness and Safety Properties
- Distributed Mutual Exclusion
- Distributed Snapshots
- Faults and Fault-tolerance
- Tolerating Crash failures and Byzantine Failures
- Recent Trends: How Clouds and Mobile Devices changed Distributed Computing

### Course Outcomes

On completion of this course, participants are expected to be capable of understanding the basics of Distributed Systems, its applications and latest trends.

### Invited Speakers

- Prof. Sukumar Ghosh, University of Iowa, Iowa, USA

\* Assistant Professor, Dept. of CSE, NIT Patna

- Prof. Bhabani P Sinha, Indian Statistical Institute Kolkata, Kolkata, West Bengal, India
- Prof. Nabanita Das, Indian Statistical Institute Kolkata, Kolkata, West Bengal, India
- Prof. Partha Sarathi Mandal, Indian Institute of Technology Guwahati, Guwahati, Assam, India

### Course Fees

- INR 1500/- for faculty
- INR 1000/- for Students and Research Scholars

The draft should be payable at Patna and in the name of **The Director, NIT Patna**

*Participants can also handover the draft or pay in cash at NIT Patna at the time of registration, however, such participants must confirm their participation by email by 31<sup>st</sup> May 2016.*

**The Completed registration form along with the draft should be send to**

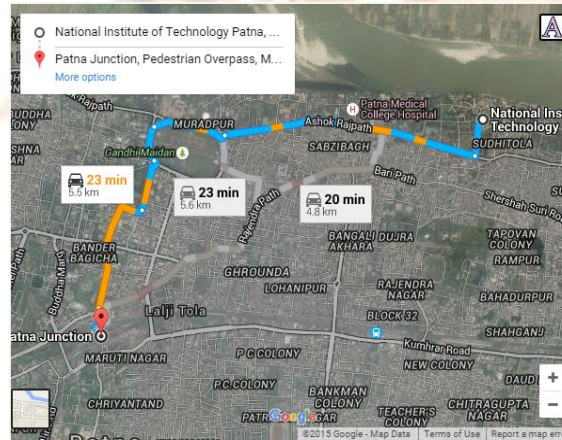
Dr. Akshay Deepak  
Dept. of CSE, NIT Patna,  
Ashok Rajpath  
Patna -800005, Bihar

**Last date of Registration**  
**31<sup>st</sup> May 2016**

### Venue: NIT Patna

#### How to Reach NIT Patna

The institute is situated on the south bank of holy river Ganga behind Gandhi Ghat. The Institute campus is 8 km from the Patna Junction railway station and 15 km from the Jai Prakash Narayan International Airport Patna.



#### For query contact:

Dr. Akshay Deepak (akshayd@nitp.ac.in)  
Dr. Dinesh Dash (dd@nitp.ac.in)

#### Accommodation

We will provide hostel accommodation in the campus to the participants on payment basis (~INR 150/day).

Expert Lecture Series on “Distributed Systems”  
June 1<sup>st</sup> to 5<sup>th</sup>, 2016

1. Name: \_\_\_\_\_

2. Educational Qualification: \_\_\_\_\_

3. Designation: \_\_\_\_\_

4. Name of the institute: \_\_\_\_\_

5. Address for Communication: \_\_\_\_\_

6. E-mail: \_\_\_\_\_

7. Phone: \_\_\_\_\_

8. D.D No.: \_\_\_\_\_ Date: \_\_\_\_\_

Bank name: \_\_\_\_\_

Amount (Rs.) \_\_\_\_\_

Date

Signature