#### **ANNOUNCEMENT**

A one week self-finance workshop

Workshop

On

Network Simulation (WNS-2017)

(ns-2/ns-3)

For Technical grooming of the technocrats associated with AICTE approved educational institutes

The best way to predict the future is to create it.

-Abraham Lincoln

Date: 8<sup>th</sup>-12<sup>th</sup>, July 2017



# Organized by

Department of Computer Science & Engineering Motilal Nehru National Institute of Technology Allahabad Allahabad-211004, Uttar Pradesh, India

## THE INSTITUTE

Motilal Nehru National Institute of Technology (MNNIT) Allahabad is one of the premier National Institute of Technology (NIT) in India. It is committed to achieve quality and excellence in academic pursuits. Established in 1961, as a Regional Engineering College, a joint enterprise of Government of India (GOI) and Government of Uttar Pradesh, the institute was transformed into NIT on June 26, 2002. With the enactment of NIT Act-2007 (29 to 2007), the Institute has been granted the status of institution of national importance w.e.f. August 15, 2007.

The Institute now offers various undergraduate and postgraduate courses such as B.Tech, M.Tech, MCA, MBA, M.Sc., M.S.W and Ph.D. degree. It has been recognized by GOI as one of the Quality Improvement Programme (QIP) centres for the M.Tech. and Ph.D. Degrees. Also, it is a lead Institution under World Bank funded GOI Project on Technical Education Quality Improvement Programme (TEQIP) (2002-2007).

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

For the first time in India under graduate course in Computer Science and Engineering was offered in 1977 under Electrical Engineering Department with a modest strength of 10 students.

The Department of Computer Science& Engineering offers courses leading to a Bachelor of Technology in Computer Science & Engineering, and Information Technology. It also offers a Master of Technology in Computer Science & Engineering, Master of Technology in Software Engineering, Master of Technology in Information Security, and Master of Computer Application (M.C.A.). Further, the department also enrolls candidates for Ph.D.

#### ALLAHABAD

The city of Allahabad is among the largest cities of Uttar Pradesh. It is situated at the confluence of three rivers- Ganga, Yamuna and the mythological Saraswati. The sacred meeting point is known as Sangam. The city better known as PRAYAG has many governmental institutions which include MNNIT Allahabad, High Court of UP, Allahabad University & tourist places like Sangam, Anand Bhawan, Narayan Ashram etc. MNNIT Allahabad is one of the premier institutes of the city offering Quality Technical Education.

## COMMITTEE

## ORGANIZING COMITTEE

## Patron

Prof. Rajeev Tripathi, Director, M.N.N.I.T. Allahabad

#### Chairman

**Prof. Neeraj Tyagi**, Head, Department of Computer Science and Engineering

#### Course Co-ordinator

Prof. R. S. Yadav

Dr. Ranviiav

Dr. Dinesh Singh

#### Course Co-coordinator

Er. Rupesh Kumar Dewang

Dr. Divya Kumar

#### Treasurer:

Mr. Pankaj Sikka

#### Members

Dr. Shashank Shrivastav

Dr. Dushyant Kumar Singh

Dr. Pragya Dwivedi

Dr. Rajitha B

Miss. Shashwati Banerjee

#### Student Co-ordinators

- 1. Vijay Kumar Sharma
- Dhirendra Kumar
- Gaurav Kumar

#### **ADVISORY COMMITTEE**

- Prof. Suneeta Agarwal, Department of C.S.E., M.N.N.I.T, Allahabad
- Prof. M. M. Gore, Department of C.S.E., M.N.N.I.T, Allahabad
- Dr. D. S. Kushwaha, Department of C.S.E., M.N.N.I.T, Allahabad
- Dr. A. K. Singh, Department of C.S.E., M.N.N.I.T, Allahabad
- Dr. D. K. Yadav, Department of C.S.E., M.N.N.I.T, Allahabad
- Mr. Manoj Wariya, Departmentn of C.S.E., M.N.N.I.T, Allahabad
- Er. Rajesh Tripathi, Department of C.S.E., M.N.N.I.T, Allahabad
- Dr. .Arun Prakash, Department of E.C.E., M.N.N.I.T, Allahabad
- Dr. Y. K. Prajapathi, Department of E.C.E., M.N.N.I.T, Allahabad
- Dr. Mayank Pandey, Department of C.S.E., M.N.N.I.T,
  Allahabad
- Dr. Anoj Kumar, Department of C.S.E., M.N.N.I.T, Allahabad

## ADDRESS FOR COMMUNICATION

Complete registration form, accompanied by the demand draft should reach the course co-ordinator on or before 05<sup>th</sup> July 2017. The contact details are:

#### Dr. Dinesh Singh

Department of Computer Science and Engineering Motilal Nehru National Institute of Technology Allahabad Allahabad-211004

Phone: 9455421546, 0532-2271351 E-mail: dinesh\_singh@mnnit.ac.in

For any further information / assistance you may contact the faculty/student coordinator at the following address/phone number:

www.mnnit.ac.in/wns2017 wnscsed@gmail.com

9450767356, 9451046968

Also, the participants are requested to send a scanned copy of the form along with the Demand Draft on the above email, to avoid inconvenience caused by postal delays.

## INTRODUCTION

The usage of communication network have grown exponentially for the several years presenting critical challenges and the new opportunities to service providers, communication technology developers, outsourcing firms and enterprises themselves. In this field, network engineers also must work proactively to improve performance and operational costs of the existing functions and to work efficiently to increase through new demand of network usage. The recent development has resulted in substantial advances in our ability to model and simulate large-scale networks. The network simulator ns-2/ns-3 is an open source event driven simulator. The ns-2/ns-3 simulation tool is helpful in open networking research and extensively used to solve modern networking projects and assignments.

### TENTATIVE TOPICS TO BE COVERED IN WORKSHOP

- Overview of ns-2,C++ and Otcl integration
- Creating wired and wireless scenario using ns-2
- Performance evaluation of existing MANET routing protocols using ns-2
- Routing and data transfer in wireless sensor networks (WSNs) using ns-2
- Prototypes for new applications for MANET and WSNs
- WSNs new protocols
- Xgraph, gnuplot, and AWK scripts for Trace file analysis
- Introduction of ns-3, Differentiating ns-2 and ns-3
- Using NetAnim, Wireshark and TraceMetrics
- Creating new modules /protocols in ns-3
- Adding external patches to ns-2 /ns-3
- Advanced features of ns-3

## **OBJECTIVE OF THE WORKSHOP**

This workshop will help the one working in area of ad-hoc networks, wireless sensor networks and other related networking environment. The purpose of this workshop is to provide an insight into fundamentals of network simulation (ns-2/ns-3). They learn how different network topologies would be simulated and analyised. The main focus is to train the participants so that they become capable enough to create simulation scenario, test and draw conclusions.

## WORKSHOP IMPACT - EXPECTED OUTCOME

Enhancing the curriculum of computer networks and network simulation. The workshop content is designed to provide in depth knowledge and complex interaction between network protocols and their implementation. Through this workshop, the research student will be able to implement and analysis their self-designed protocols using simulation tools (ns-2/ns-3). This will definitely help the students to complete their research.

Course Duration: one week, 8<sup>th</sup> - 12<sup>th</sup>July, 2017. Last Date for Receipt of Application Form: 05<sup>th</sup>July, 2017.

## WHO SHOULD ATTEND

This workshop will be of value of undergraduate students, research scholars (Ph.D., M.Tech ), faculties and Industry Personnel those are interested in the field of computer networks and simulation.

## **REGISTRATION**

To register for this course the applicants will have to pay fees in advance as per the following details

Category	Workshop
Industry Personnel	5000
Faculty, Research Scholars,(Ph. D) , M.T ech/MCA, B.Tech	4000

The registration fees should be sent in the form of a Demand Draft in favour of "WNS-2017" payable at Allahabad. Limited accommodation may be provided on first come first serve basis to the participants, based on the availability of rooms in the institute EDC, Hostels and other available places (Female Participants will be given preference). The participants have to bear their travelling and lodging expenses. Also, you are requested to send a proof of your identity and designation for claiming the category.

Registration fees include:

- Training Charges
- Lab Sessions
- Certification Charges
- Snacks and Tea

## Department of Computer Science and Engineering Motilal Nehru National Institute of Technology Allahabad Allahabad -211004

REGISTRATION FORM

Workshop

On

Network Simulation (WNS-2017)

(ns-2/ns-3)

(8<sup>th</sup>-12<sup>th</sup> July, 2017)

Name (in Block Letters)		
Date of Birth_	Sex: Male/Female	
Highest Qualifi	cation:	
Organization: _		
AICTE Approved	Yes/No	
•	culty/Research Scholar/Student/Industry	
Correspondence	ce Address:	
	E-mail	
Accommodation	n needed Yes/No	
PAYMENT DET	AILS:	
Draft No	Date:	
Issuing Bank ar	d Branch (with code)	
Amount:	Drawn on:	
(In favour of "N	VNS-2017" at 'Allahabad')	

(Signature of Applicant)