

# Department of CSEA, IGIT, Sarang

No: IGIT/CSEA/ 153

Date: 30.08.2017

## CIRCULAR

The Department of Computer Science, Engineering & Applications, IGIT, Sarang is organizing a 2-days workshop on “ R & D in Wireless and Mobile Communication using NetSim” from 4.9.2017 to 5.9.2017. The schedule and venue are mentioned below. Number of participants is limited to 50 on first come first serve basis. Faculty, M.Tech students and research scholar may participate in the workshop in free of cost. Participants from other institutes have to deposit ₹1000/- as registration fees on spot in cash.

\* Registration Fee is only for Participation in Workshop

## **AGENDA**

Day 1: 04.09.17

<u>Time</u>	<u>Description</u>
10:00 am – 1:00 pm	<b>Introduction to NetSim</b>
	Using NetSim to simulate basic Network scenarios (Hands-on)
	Analysis of Results and Packet Animation
	Sample Experiment in NetSim (Hands-on)
1:00 pm – 2:00 pm	<b>Lunch Break</b>
2:00 pm – 4:00 pm	<b>Analysis of Results</b>
	Understanding Trace files, Pivot Table and graphing through Dynamic Metrics (Hands-on)
	Packet Capture and analysis with WireShark
	Writing your own code in NetSim – Hello NetSim (Hands-on)
	<b>Q &amp; A Session</b>

Day 2: 05.09.17

<u>Time</u>	<u>Description</u>
10:00 am – 1:00 pm	<b>NetSim Working on MANET, IOT, WSN&amp;LTE</b>
	Simulation and Analysis of MANET& IOT networks (Hands-on)
	Simulation and Analysis of LTE/LTE-A networks (Hands-on)
	Sample Projects- Sinkhole Attack, LEACH
1:00 pm – 2:00 pm	<b>Lunch Break</b>
2:00 pm – 4:00 pm	<b>NetSim Code Modification &amp; MATLAB Interface</b>
	Creating My Packet and writing details to trace and animator
	MATLAB Interface - Interfacing MATLAB with NetSim for WSN
	<b>Q &amp; A Session</b>

Prerequisites:

- ✓ Basic understanding of computer networks
- ✓ Working knowledge of C
- ✓ Own Laptop

\*Registration for this workshop, please visit the url ( <https://goo.gl/forms/Vu1U8nYOex9g6OI23> )

Contact persons:      Susanta Kumar Sahoo (Asst. Prof., Dept. of CSE&A): 9438569988  
                                 Subhendu Bhusan Rout (Asst. Prof., Dept. of CSE&A): 9437991616

HOD,CSEA

## CONVENERS

**Dr. Sarojananda Mishra, Prof.**

Head of Department

Computer Science Engineering

Indira Gandhi Institute of Technology

**Email:** hodcsea@igitsarang.ac.in



**INDIRA GANDHI INSTITUTE OF TECHNOLOGY**

SARANG - 759146 DIST. - DHENKANAL (ODISHA)

AN AUTONOMOUS INSTITUTE OF GOVERNMENT OF ODISHA

## Registration Form

**(4<sup>th</sup> – 5<sup>th</sup> Sep 2017)**

**Name** : .....

**Institution** : .....

**Department** : .....

**Year** : .....

**Address** : .....

.....

**Mobile** : .....

**E-mail id** : .....

**Amount** : .....

**Date** : .....

**Signature**

**Of Participant**

**Signature & Seal**

**Principal/H.O.D**

**3 Days Workshop on**

**“R & D in Wireless and Mobile  
Communication using NetSim”**

**4<sup>th</sup> - 5<sup>th</sup> Sep 2017**

Organized by

**Department of Computer Science**

**& Application**

In Association with



## About The Institute

Indira Gandhi Institute of Technology (IGIT), Sarang was established in the year of 1982 and was managed directly by the Govt. of Orissa in the name of Orissa College of Engineering (OCE). The Institute is offering nine Under Graduate Engineering, two part-time Post Graduate Engg courses and nine full time Post Graduate Engg courses / Master course.

The Institute is fully residential with an integrated campus covering 179 acres of land. The research activities of the institute are comparable with any other leading institute of the State and the Country. Every year, National Conferences / Short term courses are organized in the institute in collaboration with IE / ISTE / AICTE. Within a span of three decades, the institute has grown up to the National level academically. This is the first Govt. Engg. College in the state to have accreditation from NBA (AICTE) because of its academic excellence.

Vibrant student activities, encouragement to inter-disciplinary activities, entrepreneur efforts, and almost 100% placement record are a matter of pride for the students as well as the faculty.

## About Computer Science Department

Computer science engineering and application are responsible for technological innovations that have revolutionized many aspects of our lives. Further breakthroughs can only be barely imagined today.

To accomplish these in ways that are sensitive to the needs of individuals and society, we need highly educated computer scientists with a strong background in the liberal arts.

Our courses empower both majors and non-majors to leverage and to contribute to this rapidly evolving field.

Offering both a major and a minor, Department offers you a wide range of courses, an independent senior project and opportunities to work on cutting-edge research projects with CS faculty members.

## Workshop Highlights

The objective of this program is to expose users to the latest developments in wireless, mobile and sensor network technologies.

Users can then discover how NetSim enables them to perform simulation tasks such as network modeling, traffic modeling and analysis of performance the specified networks. The advanced topics cover the latest R & D and users would learn how to write their own algorithms and simulate them using NetSim.

### Day 1

- Introduction to NetSim
- Simulate basic Network scenarios in NetSim
- Analysis of Trace files, Graphing through Dynamic Metrics
- Writing your own Code in NetSim
- Introduction to MANET
- Working of MANET Protocols
- Sample Projects in NetSim

### Day 2

- Working LTE, LTE-Advanced
- Simulation of Femtocell network and D2D in NetSim  
Wireless Sensor Network and Internet of Things
- Analysis of IOT networks
- Implementing Dynamic Clustering in WSN using MATLAB
- Working of VANETs and Cognitive Radio

## Speaker And Resource Person

### **Mr. Thomas Santhosh**

Mr.Thomas Santhosh is presently working as Application Engineer at [TETCOS](#), Bangalore and has several years of experience in computer networks & software development. He is B.Tech in Information Technology from K.S.Rangasamy college of Technology. He was honoured with the title of "Best Student for overall activities". His area of expertise is Mobile Ad-hoc Network, Cognitive Radio and LTE. He has worked on several projects in these domains on NetSim.