



NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA

TEQIP Sponsored
Short Term Course on
RECENT TRENDS IN WIRELESS
COMMUNICATION (RTWC-2016)

1-2 October, 2016
[Registration Form]

1. Name:
2. Position:
3. Department:
4. Institution:
5. Address:
6. E-mail Address:
Mobile No.:
Telephone No.:
Fax No.:
7. Educational background:
8. Areas of research interests:
9. Accommodation Required: Yes / No

Date: Signature of the Applicant

Place:

Forwarded through H.O.D/Institute

DEPARTMENT OF ELECTRICAL ENGG. :

The Electrical Engineering department at NIT Rourkela has specialized faculties in all important areas of electrical engineering such as communication & signal processing, power system, power electronics & drives, control & automation and industrial electronics. The department has well equipped laboratories and the academic and research activities in the department focus on the frontier areas of electrical engineering.

IMPORTANT DATES:

Last Date for Receipt of Registration Form:

September 20, 2016.

Selection Letter to be e-mailed:

September 24, 2016.

Course duration:

October 1 to October 2, 2016.

ADDRESS FOR CORRESPONDENCE:

Prof. Susmita Das, Coordinator *

Phone: 0661-2462402 (O), 9438539606

e-mail: rtwc2016@gmail.com, sdas@nitrkl.ac.in

Or

Prof. K.R.Subhashini, Co-coordinator *

Phone: 0661-2462415 (O), 9937267840

e-mail: krsbhashini@nitrkl.ac.in

*Department of Electrical Engineering, NIT Rourkela, Odisha- 769008, India

Note: Applicants are requested to send the scanned copy of Signed Registration Form in the following email id for early registration:
rtwc2016@gmail.com

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1-2 October, 2016



Prof. SUSMITA DAS
(Coordinator)

Prof. K.R.SUBHASHINI
(Co-coordinator)

ORGANIZED BY



DEPARTMENT OF ELECTRICAL
ENGINEERING
NATINAL INSTITUTE OF TECHNOLOGY
ROURKELA, ODISHA-769008, INDIA

INTRODUCTION:

This short term course on recent trends in wireless communication will provide a forum for discussion on theoretical and practical aspects of advanced and upcoming wireless communication technologies, exchanging research ideas, exploring challenges and possible solutions and future scope of the research. This course will be organized by Electrical Engineering Department, NIT Rourkela during 1st -2nd October, 2016. The goal of this short-term course is to explore the insights of latest wireless technology and upcoming 5G technology. Experts from industry & academia will be invited to deliver lectures.

SCOPE:

Demands for more bandwidth requiring applications with increasing number of wireless devices cause inevitable evolution of wireless systems. However, the spectrum is still limited and spectral crowd demands more efficient spectrum usage. Development of new physical layer techniques for wireless communication systems, algorithms that increase data rate, improves capacity and system performance, reducing the power consumption are some of the goals. The current LTE standard has made tremendous gains in the efficient use of Multiple-Input Multiple-Output (MIMO) and OFDM technique. Smart antenna systems are also a defining characteristic of MIMO systems.

As extended Smart Antenna technology, MIMO supports spatial information processing, in the sense that conventional research on Smart Antennas has focused on how to provide a beamforming advantage by the use of spatial signal processing in wireless channels. In the fourth generation (4G) cellular networks, LTE-A mobile communication systems, the microcell BSs (e.g., hotspot BSs and femtocell BSs) have been deployed to satisfy high-speed transmission. To meet 1000X wireless traffic volume increment in the next decade, the fifth generation (5G) cellular network is becoming a key research topic in academia. To satisfy seamless coverage, the density of 5G BSs is highly anticipated to come up to 40–50 BSs/km². Therefore, the future 5G cellular network is an ultra-dense heterogeneous cellular network. Along with that, application of Cognitive Radio technology which has awareness of surroundings and self-adapting capabilities for spectrum sensing is also an emerging research area in wireless communication.

TOPICS TO BE COVERED:

**MIMO-OFDM Based PHY layer technology,
Smart Antenna and Beamforming
Applications,**

Emerging Wireless Technologies:

Spectrum Sensing Using Cognitive Radio,
Cooperative relay strategies, Device to Device
communication in Het Net

REGISTRATION FEE:

Registration is free for all participants.

**(Registration kit, course materials,
Accommodation* and Fooding, &
Refreshments will be provided)**

**(* Free Accommodation may be provided in
the Institute Guest House based on
availability)**

The filled in registration form should be sent to:

**Prof. Susmita Das
(Coordinator: RTWC-2016)
Department of Electrical Engineering,
NIT Rourkela,
Odisha- 769008, India
Phone: 0661-2462402 (O), 9438539606
rtwc2016@gmail.com, sdas@nitrkl.ac.in**

**Last Date for Registration
20 September, 2016**