

One Week National Level Workshop on

“Long Term Evolution-Advanced and It’s Research Challenges”

January 28th and February 1st 2019

Application

Name of the participant :

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Organisation :

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Address :

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Phone :

Mobile :

Email :

Applicant Signature

Signature
Principal / HOD

Note : Use Photocopies of registration form, if needed.

Registration Details :

Payment Shall be remitted through Electronic Found Transfer Facility to

Account Holder : Principal, JNNCE, Shivamogga

Account No. : 6322201000028

**Name of the Bank : Canara Bank,
JNNCE Campus, Shivamogga**

IFSC/RTGS Code : CNRB0006322

ABOUT JNNCE

JNNCE was established in the year 1980 by the National Education Society. The college is affiliated to Visvesvaraya Technological University (VTU), Belagavi and recognized by AICTE, New Delhi. It offers 7 UG and 7 M. Tech Program besides MBA and MCA. It has 7 Research centers recognized by VTU. Spread over 52 acres, the campus has all the amenities to cater to the needs of about 3500 students and 400 faculty and staff. All the departments have good infrastructural facilities with highly qualified and experienced faculty, staff and well-equipped laboratories. The college is regarded as one of the excellent centres for technical education and research. JNNCE is ranked 47th among top 75 engineering colleges in India and 8th in Karnataka as per OUT LOOK –MDRA ranking survey 2017 consecutively. The college is providing its fruitful services in the 37th year. The college organizes International and National Workshops, Conferences, Seminars and Short-Term Courses on a regular basis.

ABOUT THE DEPARTMENT

Department of Telecommunication Engineering started in the year 2000 with intake of 60, we are committed to a strong vision to emerge as a centre of academic excellence in the field of Telecommunication engineering by keeping pace with rapidly changing technologies and industry requirements to create technical manpower of global standards for the betterment of industry and society. Over 850 students graduated from our department and are currently working in well reputed companies.

Department conducted National and International Workshops and Conferences in order to upgrade the knowledge of both students and faculties.

1. Five National and International conferences were conducted.
2. Over 15 National workshops have been organized in association with IIT Bombay and IITKharagpur.
3. Department has NODAL centre for e-Yantra Robotics lab under IIT Bombay.
4. Experience faculty with 1- Doctorate, 5- Pursuing Ph.D. and 7- M. Tech.
5. Department students secured Ranks at University level.

OBJECTIVES OF THE WORKSHOP

The objectives of Long Term Evolution Advanced and its Research Challenges workshop is being held to educate VTU faculty and students about the progress of Long-Term Evolution (LTE) and LTE-Advanced with specific reference to 4G. Course on LTE 4G has been introduced in the CBCS scheme for both Undergraduate and Post graduate programmes in communication related streams. The workshop is being conducted to facilitate the faculty of VTU affiliated engineering colleges to understand the course contents and research challenges to get a brief overview about LTE and LTE-A components from experts in this area.

TOPICS TO BE COVERED

- I. Introduction to LTE Basics, Standards and Architecture
- II. Introduction and research challenges in LTE -Advanced

1. CARRIER AGGREGATION : Benefits of CA, Protocol Stack

Research Challenges :

- * New carrier types,
- * Resource Management
- * Multi-stream Aggregation
- * Network Sharing
- * Wide band trans-receiver
- * Carrier aggregation enhancements
- * New Frequency bands

2. ENHANCED MIMO: Basic modes of operations, MIMO features in Rel-10/ Rel-11 LTE Advanced, Full Dimension MIMO for Rel-12 LTE Advanced

Research Challenges :

- * Massive MIMO
- * 3-Dimensional Channel modelling
- * Feedback enhancement, reference signals and Code-book design

3. COOPERATIVE MULTIPOINT TRANSMISSION AND RECEPTION: Downlink CoMP techniques, Uplinks CoMP techniques, joint reception

Research Challenges :

- * Backhaul aspects
- * Channel information feedback
- * Reference signal design
- * Other enhancement for Rel-12

4. RELAYS: Benefits, Relay types, architecture, Protocol Stack

Research Challenges :

- * Mobile Relay
- * Site Planning
- * Relay selection
- * Backhaul
- * Interference Management
- * Other aspects

5. HETEROGENEOUS NETWORKS : Cell association, Inter-Cell interference cancellation, Time domain based ICIC, Frequency domain based ICIC, Mobility Management

Research Challenges :

- * Cell association and inter cell interference cancellation
- * Mobility Management

6. SELF ORGANIZING NETWORKS : Requirement

7. MACHINE-TYPE COMMUNICATION : Air interface support for MTC devices

- * RAN over load control
- * Mobility Signalling reduction for Low mobile devices
- * Link adaptation techniques
- * MTC traffic modelling and characterization

8. DEVICE TO DEVICE COMMUNICATION :

- * Research Challenges:
- * Mode Selection, *Group Communications,
- * Interference & resource Management, *D2D-based multi-hop communication, other communication aspects.

ELIGIBLE PARTICIPANTS

Faculty from Dept. of TCE, ECE, EEE, CSE, ISE and MCA.

B.E. Final year and Pre-final year students from Dept. of TCE, ECE, EEE, CSE & ISE, M. Tech. (Electrical science) students and MCA students.

Note:

- * Registration Fee for faculty Rs. 1000/-
- * Registration Fee for students Rs. 500/-
- * Restricted to only 60 participants, based on first come first serve basis

IMPORTANT DATES

Last date for Registration 25-01-2019

FOR ENQUIRES CONTACT

Prof. Madhusudhan G.
Mobile : 9538667876
Email : gmmadhu@jnnce.ac.in

Prof. Anand Raj S. N.
Mobile : 9845579713
Email : anandraj@jnnce.ac.in

CHIEF PATRONS

Sri A. S. Vishwanatha, President, NES.
Sri T. R. Ashwathnarayana Setty, Vice President, NES.
Sri S. N. Nagaraja, Secretary, NES.
Sri Amarendra Kireeti, Joint Secretary, NES.
Sri C. R. Nagaraj, Treasurer, NES.

PATRONS

Dr. H. R. Mahadevaswamy, Principal, JNNCE, Shivamogga.
Dr. L. K. Sreepathi, Vice Principal, JNNCE, Shivamogga.

ORGANIZING CHAIR

Dr. Ushadevi M. B. HOD, Dept. of TCE, JNNCE

COORDINATORS

Prof. Madhusudhan G., Dept. of TCE, JNNCE
Prof. Anand Raj S. N., Dept. of TCE, JNNCE

ORGANIZING COMMITTEE

Prof. Amarappa S.	Associate Professor
Prof. Madhukar C.S.	Associate Professor
Prof. Harisha S.B.	Assistant Professor
Prof. Ashwini S.R.	Assistant Professor
Prof. Shashikiran S.	Assistant Professor
Prof. Aparna	Assistant Professor
Prof. Bhuvana Khare	Assistant Professor
Prof. Benak Patel M.P.	Assistant Professor
Prof. Rashmi M Hullamani	Assistant Professor
Prof. Harish T.S.	Assistant Professor

Telephone : 08182-276707 / 08 / 09
Website : www.jnnce.ac.in.



National Education Society (R.)
**JAWAHARLAL NEHRU NATIONAL COLLEGE
OF ENGINEERING**

SHIVAMOGGA – 577204

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INTERNAL QUALITY ASSURANCE CELL

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