#### TEQIP-II INITIATIVE :: 1.2.1 - COE/CME

# One Week Workshop on "Research Avenues in Software Defined Radio and Cognitive Radio"

8<sup>th</sup>- 13<sup>th</sup> February 2016

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(Please feel free to photocopy if more than one participant is registering

#### About the Institution

R.V. College of Engineering (RVCE), Bengaluru, India, is one of the premier technical institutes of the country. Established in 1963. RVCE has celebrated its Golden Jubilee. The college currently has about 5600 students and over 400 faculty and 250 supporting staff. RVCE currently offers 12 Bachelors and 22 Masters Programs (annual intake of about 1750 students), and carries out research and consultancy activities in all departments, with provision for Ph.D studies. RVCE has set a vision "Leadership in Quality Technical Education, Research & Innovation, through Teamwork, with a focus on Development of Sustainable and Inclusive Technology".

RVCE is an Autonomous Institution affiliated to Visvesvaraya Technological University, Belgavi. RVCE has been awarded "Engineering College of the Year-2015" by the Higher Education Review Magazine for Enhancing Employability, during Dec. 2015. RVCE has been certified as Global League Institute by Great Place to Study Research Institute (GPSRI) on the 19th November 2015 at prestigious venue – House of Commons, UK by Rt. Hon. Virendra Sharma, MP. RVCE's ranking according to the survey of 'The Week' magazine – June 2015: 9th among top 99 Pvt. Engg. Colleges in the country. The institution is looking at promising entrepreneurship in a big way.

# **About the Workshop:**

The workshop addresses the current technological status of radio frequency design, reconfigurable signal processing hardware and software issues at all levels. The workshop provides technical and practical hands-on session on SDR and Antenna design/simulation. The main objectives of the workshop are to understand major standards of SDR/Cognitive Radio, various architectural designs of SDR and Interfacing of SDR platform. The workshop provides a platform for the academicians and practicing professionals to discuss the current issues for the interoperability of various radio networks. The workshop may establish the state of art facilities for interdisciplinary research which is supported by Centre of Excellence (Large area flexible Microelectronics)

# **Objectives and Scope:**

The Workshop focuses on:

- Highlight promising research results and novel RF and Digital Communication Technologies.
- Improve teaching, learning and also to explore more areas to focus on research and development.
- Create opportunities and means of interoperability among different radio systems.
- Demonstrate and strengthen skills to take up research.

# Major Topics to be discussed in workshop:

- Introduction to Antenna and Industry trends
- Introduction to Software Defined Radio / Cognitive radio, SDR application development environment
- Essentials of SDR Hardware & Signal Processing
- Practical demonstration of basic applications such as Analog and Digital Modulation / Demodulation schemes, filter design using SDR
- Video transmission and reception using SDR
- Basics of OFDM and realization of OFDM using SDR, WiFi protocol and application using SDR
- Interface of SDR platform with Matlab
- Basics of Mobile Communication and Setting up a BTS with SDR
- Discussion of LTE,4G
- Introduction to MIMO with SDR

# **Guest Speakers:**

Mr. Amit Sharma, Managing Director & Mr. Karthik, Technical Director from AMITEC ELECTRONICS Ltd., New Delhi.

Mr. Swapnil Kulkarni & Ms. Priyanka, ALTAIR INDIA Pvt. Ltd., Bengaluru.

 $Technical \, Team \, from \, Silicon \, Micro \, Systems, \, Bengaluru.$ 

Email: somanna@rvce.edu.in

# Who can Register:

Faculty, Research Scholars, Post graduate students and Undergraduate students who are interested in the research activity and working in the RF, MIMO, Networks domain, Signal Processing domain and communication.

#### **Registration Fee:**

Practicing Professionals: ₹4,000/-

Faculty from Teaching Fraternity: ₹2,000/-

Research Scholars/PG &UG students: ₹1,000/-

Last Date for Registration: 30-01-2016

Demand Draft may be sent in favor of "PRINCIPAL, RVCE-TEQIP" payable at Bengaluru-59.

#### Note:

Registration Fee does not include accommodation charges

Kindly send the scanned copy of filled registration form via email to: bhagyar@rvce.edu.in

#### Venue:

Seminar Hall, TE Dept, RVCE

# For Correspondence:

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#### Patrons:

Dr. M.K. Panduranga Setty, President, RSST

Dr. K. Balaveera Reddy, Mentor (TEQIP), RVCE

#### **Advisory Committee**

Dr. K.N. Subramanya, Principal, RVCE

Prof. K.N. Raja Rao, Advisor, TEQIP Coordinator

Dr. N.S. Narahari, Prof. & Head, IEM Dept. and Nodal Officer (Finance). TEQIP

Dr. P. Ramakanth Kumar, Dean-Academic, RVCE and Nodal Officer, TEQIP

Dr. Pushpa Agrawal, Nodal Officer (Equity Plan), TEOIP

Dr. M. Uttarakumari, Coordinator, TEQIP COE-CME, RVCE

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#### Chief Co-Ordinator:

Dr. G. Sadashivappa, Prof. and Head, Dept. of TE

#### **Co-Ordinators:**

Prof. Shanthi.P, Assistant Professor, Dept. of TE

Prof. Neethu.S, Assistant Professor Dept. of TE

Prof. Sahana B, Assistant Professor, Dept. of ECE

Prof.Vidya M.J, Assistant Professor, Dept. of EIE

# Rashtreeya Sikshana Samithi Trust R V COLLEGE OF ENGINEERING

(Autonomous Institution Affiliated to VTU, Belagavi)

Bengaluru - 560 059, Karnataka



TECHNICAL EDUCATION QUALITY
IMPROVEMENT PROGRAMME
[TEQIP—II INITIATIVE]
TEQIP 1.2.1 - COE/CME

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Jointly Organized by
Departments of
Telecommunication Engineering,
Electronics & Communication Engineering,
Electronics & Instrumentation Engineering
R.V.College of Engineering,
Bengaluru - 560 059

**Technical Association with** 







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