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**Department of Electronics and Communication Engineering**  
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## Editorial

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Cognitive radio is being intensively researched as the enabling technology for license-exempt access to the so-called White Spaces (WS), large portions of spectrum in the UHF/VHF bands which become available on a geographical basis. We are proposing an opportunistic MAC protocol for the cognitive radio network which is based on IEEE 802.11b protocol. Opportunistic MAC protocol consists of three phases namely, initialization phase, spectrum sensing phase and data transmission phase. Each phase is discussed and simulation results using MATLAB are shown so that spectrum utilization can be increased.

Accessing the use of internet in mobile phones has been popular day by day just because of its features like portability, small in size. In nowadays mobile phones interfaces becoming very user friendly just because of its interactivity. In the past time when the people have the choice whether they want to use internet on the personal computer or in mobiles phones. At that time most of the people try to use internet on their desktop when they are browsing the internet and mobile phones is used only for the purpose of mail checking but today mobile technology is growing very fast now surfing on mobile phone is becoming very easier as similar to desktop. when any user want to access the internet on mobile phone the WAP (wireless application protocol) browser is available. All the communication are passed from mobile browser to www server with the help of gateway. The gateway acts as intermediate between the mobile devices and web server. This paper discusses about the protocol used in mobile devices and server side and how the communication take place from one end to other end. This paper focuses on the technique of integrating the security protocol together so that problem facing at the gateway can be resolved. The paper also presents the comparative analysis of security protocol.

The edition of KIET IJCE contains articles on Integration of Security Protocol in Between the Network Gateway, Ergodic Channel Capacity as MIMO Performance Measure, Simulation of Channelization Codes in 2G And 3G Mobile Communication Services Using MATLAB And VLSI Support For Voice Over Internet Protocol Scheduling and Buffering in High Speed Packet Switched Network.

We take this opportunity to thank all those contributors, reviewers in making this issue a memorable one. Suggestions and feedback from our readers are welcome for the overall improvement of quality of the Journal.



## Preface

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**Dear Researchers,**

We take this opportunity to welcome you all to the Second issue of International Journal of Communications & Electronics (KIET - IJCE). This journal will provide a forum for in depth and substantial discussions on the theory, design and implementation of the emerging technologies in Communications, Networking, Microwave and Electronics techniques, thus providing solutions and strategies for business resilience.

It gives us an immense pleasure to have an amalgam of researchers from the fields of Communication Engineering, Electronics, and related technologies. The purpose of the Journal is to provide a platform to foster interdisciplinary communication among the delegates and to support the sharing process of diverse fields in various concepts and principles related to these domains.

Our appreciation also goes to entire team whose dedication and timeless efforts have gone for number of days for the Second issue of the Journal.

**Editors**



## Message

I am delighted to note that the Department of Electronics and Communication Engineering, KIET Group of Institutions, Ghaziabad is introducing Second issue of International Journal of Communications and Electronics (KIET - IJCE).

I appreciate the efforts on the part of the Editorial Committee in bringing out an issue on Communications, Networking, Microwave and Electronics techniques.

I understand that the papers contributed for publication in the Second issue are on almost all the current aspects of Communication Systems, Electronics systems, Microwave Engineering, Signal Processing & Applications, Networking Technologies and several others.

I have great pleasure in congratulating the Editors of this issue of KIET - IJCE for their untiring efforts in bringing out this Second issue which will be a valued treasure for all who pursue research in Communications, Networking, Microwave and Electronics Engineering areas.

Let me close with warmest regards.

**Dr. Narendra Kumar**  
President  
KIET – IJCE



## Message

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It gives me immense pleasure in writing this foreword for the Second issue of the KIET International Journal on Communications and Electronics (KIET - IJCE) being started by the Department of Electronics and Communication Engineering, KIET Group of Institutions, Ghaziabad. This journal is targeted towards researchers, professionals, educators and students to share innovative ideas, issues, recent trends and future directions in the fields of software and network technologies.

The journal KIET - IJCE is targeted towards researchers, professionals, educators and students and industrial papers on the theory, design and implementation of the emerging technologies as well as share innovative ideas, issues, recent trends and future directions in the fields of Communications, Networking, Microwave and Electronics techniques. Furthermore, it will enable the researchers in the various domains to foster the exchange of concepts, prototypes, research ideas and the results of research work which could contribute to the academic arena and also benefit business and industrial community.

I am sure that this issue would greatly benefit researchers, students and faculty. Young scientists and researchers will find the contents of the issue helpful to set roadmaps for their future endeavors.

**Dr. Sanjay Sharma**  
Editor – in - chief  
KIET - IJCE





## **ABOUT THE KIET - IJCE**

**International Journal of Communications and Electronics** solicits original research papers addressing theoretical and practical implementations in Electronics and Communication system applications for the Upcoming Edition of IJCE. It is the vision of IJCE to publish research articles in all areas of human study without financial restriction to readers using the open access model of publication. We strongly believe that the open access model will spur research across the world especially as researchers gain unrestricted access to high quality research articles. IJCE is a bi-monthly journal and if the manuscript does not suit in the current issue then it can be considered for the next upcoming issue. Authors are invited to submit their original manuscripts.

## **ABOUT THE DEPARTMENT**

Department of ECE grooms the students to excel in the field of technology. Our students are trained in both software and hardware skills and basic Inputs are provided to make them self-confident to work in industry and get encouragement for higher studies & research. The department also contributes to the society by accomplishing technical projects that caters to the various requirements of the present day world. The students are also encouraged to participate in various technical and extra-curricular events. The department has qualified and dedicated faculty members to provide good technical support to all the students. The department of ECE has a vision to become a centre of excellence in the field of Electronics and Communication Engineering. All our faculty and students are dedicated to achieve this goal with full vigor, enthusiasm and good ethical values. Department is running B.Tech. (ECE), M.Tech. (ECE). Department is involved in high quality research on several domains like Optical Integrated Circuits, Signal Processing and Communication, Semiconductor Device Characterization and Integration, Advanced Microwave Techniques, and other emerging fields under *AICTE Modrobs Projects*.