KIET IJCE

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Editorial

Interference from other stations is the main reason behind scaling of packed radio networks in transmission. Interference is caused due to nearby stations as well as from distant stations because the signals received from those stations could be strong or week. Thus the overall noise level and interference caused due to the transmission of signal to a particular station are analyzed and found to remain manageable even as the system scales to billions of nodes. Thus to avoid collision in the packet data transmission new concepts are developed. Telecommunication can be achieved by either sending signals through cables or by letting generated signals propagate naturally through space as electromagnetic radiation. Cables can provide unlimited bandwidth, but require a lot of capital investment. The cable costing becomes expensive due to labour costing and installation charges.

Nowadays, a high performance analog circuit using low voltage becomes essential mainly due to the advance of the large scale integration with complicated circuit systems and the demand for battery-operated portable equipments. However, supply voltage reduction in analog circuit causes several performance degradations and, therefore, new approaches in the design are needed to obtain analog circuits with enough bandwidth, gain and linearity. Operational transconductance amplifier (OTA) is one of the most basic cells as OTA finds many applications in many analog circuits such as operational amplifier, voltage comparators, A-D and D-A converters and high frequency filters.

The edition of KIET IJCE contains articles on Communications through Pseudo Random Scheduling for Packed Radio Networks via Channel Division, Development of Data Acquistion and Analysis System for HF/DF Chemical Lasers, Comparative Analysis of CMOS based Pseudo Differential Amplifiers, Metamaterial based Optical Suface Plasmon Resonance Sensor and Optical Detection of Chlorine for Chemical Oxygen Iodine Laser areas.

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

Dear Researchers,

We take this opportunity to welcome you all to the first 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 first 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 First 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 first 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 first 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

It gives me immense pleasure in writing this foreword for the first 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.*