

Call for Articles

The technical magazine is a new initiative of IEEE EDS Calcutta Chapter and is dedicated to under-graduate, post-graduate students and entry level research scholars who wish to pursue their academic and professional career in the domain of electron devices and their applications. The need for this type of technical magazine is realized during our attempts to reach the EDS student members in various seminars and workshops. The young students often come with several queries, which comprise of queries related to the topics of interest of EDS. This technical magazine therefore attempts to present cutting edge technical ideas and important concepts relevant to the theory and applications, new research ideas and technical developments of electron devices in a lucid manner. This technical magazine is however, in no way a substitute for the various journals, letters, conference proceedings and newsletters published by IEEE Electron Devices Society. At present the magazine will be published online biannually in the website of EDS Calcutta Chapter.

The scope of the magazine includes but is not limited to

Advance Semiconductor Devices

- (i) Novel high-density emerging MOS technologies (DG-MOSFET, FinFET, Tunnel FET, Junctionless FET);
- (ii) Novel Circuit Design,
- (iii) Challenges of emerging CMOS technologies;
- (iv) Novel design methodologies and tools;
- (v) Manufacturability and Fabrication Challenges
- (vi) Variability and Reliability Issues
- (vii) Analogue and mixed circuits analysis

Emerging Technologies

- (i) Spintronic devices,
- (ii) Spin based Memory devices
- (iii) Re RAM
- (iv) CNTs
- (v) SETs and quantum dot devices
- (vi) DNA
- (vii) Graphene based devices
- (viii) Molecular/organic devices
- (ix) Sensor Devices (MEMS, NEMS etc.)
- (x) Electron Devices in Biomedical, Space, Nuclear Physics, Automotive applications etc.
- (xi) Thin Film Transistors
- (xii) Photonic Devices and OEIC

VLSI Design Tools and Techniques

- i. Simulation framework
- ii. Overview of SPICE modelling technology and system integration methodologies such as circuit and device simulator (Cadence, Xilinx, Tanner, TCAD tools of Silvaco, Synopsys)
- iii. Overview of PDK

- iv. FPGA Design and Reconfigurable Architecture
- v. VLSI Design Synthesis and Algorithms

Submission Guidelines

- The manuscript needs to be written strictly at the level of under-graduate and post-graduate students.
- The content should not be overloaded with technical details. Mathematical equations should be used only if they are relevant and directly help understanding the concept.
- Articles should be restricted 2,000-4,000 words in length, otherwise these will not be considered for publication.
- Articles should be single column double space and preferably be composed by Microsoft Office in Times font. A pdf version of the manuscript is also requested for review purpose.
- Number of figures should not exceed 10.
- Graphs and diagrams must reproduce well when reduced in size. Line drawings submitted as files should be in JPEG, encapsulated postscript (EPS) or bitmapped (TIFF) format at 300 dpi published size.
- Articles need to be stand alone in nature. Please only list the important references at the end of the manuscript, restricting within 12.

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All submitted manuscripts should be peer reviewed. Relevant IEEE rules regarding plagiarism are applicable.

The articles must be submitted to the following email ids in the above mentioned format:

1) Dr. Soumya Pandit

Email: **soumya.pandit.rpe@gmail.com**

2) Dr. Swapnadip De

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The last date for submission of Articles is **November 15, 2015**. The first issue of the magazine is scheduled to be published by the end of December, 2015.