Editorial

Mohammad Ayoub Khan

School of Engineering and Technology,
Sharda University,
Plot No. 32-34, KP III, Gr. Noida, UP. 201306, India
Email: softayoub@gmail.com

Biographical notes: Mohammad Ayoub Khan received his PhD in Electrical Engineering from Jamia Millia Islamia (a central university), India. He works in a multi-disciplinary environment involving frequency identification, microcircuit design, and signal processing, NFC, front end VLSI (electronic design automation, circuit optimisation, timing analysis), placement and routing in network-on-chip etc and applied to various real world problems. He has published over 60 publications and given more than ten plenary lectures and conference tutorials in these areas. Currently, he works with the Sharda University, a leading educational institution in India. He serves the editorial board of over ten international journals and has also guest edited five special issues on various topics.

We are delighted to welcome you to the third issue of *International Journal of Circuits and Architecture Design* (*IJCAD*). *IJCAD* is a peer-reviewed international journal with a key objective of providing the academic and industrial communities with a medium that presents original cutting edge research related to the role of circuits, architecture design in electronic design automation.

Rapid developments and convergence in consumer electronics have made the theory of VLSI circuits a burgeoning area of research and development. The *International Journal of Circuits and Architecture Design* (*IJCAD*) proposes and fosters discussion on circuits, architecture design, systems, processor architecture and electronic design automation.

The journal provides a platform for research scholars, scientists and academicians worldwide to promote share and discuss the various new issues and developments in different areas of circuits, architecture and design.

The objectives of the journal are to disseminate new knowledge and technology among the academic and research communities, professionals and industry practitioners, thus bridging the gap between research theories and actual implementation. The journal represents a current, comprehensive and practical information tool in the area of circuit and architecture design.

IJCAD intends to publish original and unpublished work that describes current research in circuits and architecture design on both the theoretical, methodological and fabrication aspects, as well as applications. *IJCAD* is published quarterly (four issues every year). *IJCAD* publishes two types of articles: regular papers and brief (short) papers.

Regular papers describe recent fundamental contributions in the field of circuits and architecture design. Brief papers are targeted for the rapid publication of special short communications. Each manuscript is thoroughly reviewed by three or more independent reviewers. The journal policy is to notify the authors with the review result within 90 days of receipt of their papers.

Finally, five submissions were accepted for publication in second issue by 30 professional reviewers. Finally, four submissions were accepted for publication in second issue.

The first paper titled 'An efficient VLSI design of a new CRT-based reverse converter for the moduli set $\{2^n, 2^{2n} - 1, 2^{2n+1} - 1\}$' presents an efficient reverse converter for dynamic range moduli set. The proposed converter is based on New Chinese Remainder Theorem I scheme. Authors have designed many efficient fine grain computational units increase the speed of proposed convertor. The proposed VLSI implementation uses reduced hardware compared to the existing design.

The second paper titled 'Universal platform for functional testing of printed circuit boards' presents the development of a cost-effective, universal platform for testing of printed circuit boards (PCB) at the function level. The presented system is reconfigurable and reprogrammable to minimise the test time and expand test coverage. Also, authors have proposed a platform which is universal and designed to test variety of PCB circuits that reduces test time.

Third article titled 'Design of optimal nano-CMOS differential VCO for RF applications' focuses on the design of low phase noise and low power robust nano-CMOS differential voltage controlled oscillator (DVCO) for a desired frequency of oscillation 2.4 GHz. Authors have applied constrained multi-objective optimisation and infeasibility driven evolutionary algorithm (IDEA) to minimise the phase noise and power consumption simultaneously.

Fourth article titled 'Low power 0.4 V operational common mode feed forward transconductance amplifier' presents operational transconductance amplifier which is designed for 90 nm technology. Authors have used slew rate of 0.055 V/μs with subthreshold operation.

Fifth article titled 'Design and simulation of a low voltage, low power OTA-based filter for biomedical signal recognition' presents an filter for biomedical applications. The authors have presented low power and voltage design based on operational transconductance. This filter can handle input signals up to 400 mV with a total harmonic distortion (THD = 52.8 dB) at 1 V supply voltage and the total power consumption is 4.5 μW.

We would like to take this opportunity to thank all the people who have helped in releasing the second issue. We are also grateful to all our editorial board members who provided us with a lot of support and advice, and who will continue to support us in the coming years. All of them are established researchers in their field and we are sure that their international reputation and great expertise in the field of circuit, architecture and design will have a significant contribution in shaping up *IJCAD* as a reputed international journal.

We are honoured and fortunate to work with a strong technical editorial team of Inderscience Enterprise Ltd.

Our special thanks go to all the authors who have contributed papers to the inaugural issues of *IJCAD*. We hope to build *IJCAD* so that it becomes a central forum for the circuits and architecture design community and one of the main media for presenting original research ideas. We encourage researchers from all disciplines and specialties to submit their papers, as well as reviews, and letters to the editor.

Thanks again for all your encouragement and support. We look forward to working with you.