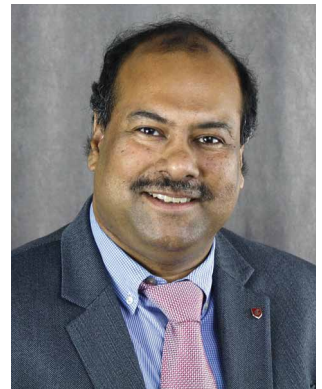


## From the EIC



# Approximate Computing: Challenges, Methodologies, Algorithms, and Architectures for Dependable and Secure Systems

■ **THE ARTICLES IN** this issue are divided into two groups: 1) the first group comprises the Special Issue on Approximate Computing: Challenges, Methodologies, Algorithms, and Architectures for Dependable and Secure Systems and 2) the second group consists of general interest articles.

The highlight of this issue is the Special Issue on Approximate Computing: Challenges, Methodologies, Algorithms, and Architectures for Dependable and Secure Systems. There has been a plethora of recent investigations on the broad topic of approximate computing. It is an enabling technique to establish the tradeoff between power, performance, and accuracy in computing. So far, many approximate techniques and computer-aided design (CAD) tools have been developed targeting different abstraction layers: circuit, architecture, and software. This special issue consists of three papers from both academia and industry addressing the broad topic of approximate computing. This special issue also includes a guest editorial presenting the salient features of the three papers. We thank the guest editors, Alberto Bosio, Mario Barbareschi, Alessandro Savino, Jie Han, and Jürgen Teich, for making this special issue possible.

In addition, we have, in this issue, three general interest articles, titled as follows: 1) “Functional Verification of a RISC-V Vector Accelerator”; 2) “Recycling Test Methods to Improve Test Capacity and Increase Chip Shipments”; and 3) “Tree-Based Unidirectional Neural Networks for Low-Power Computer Vision.”

This issue also includes a report on the 28th Asia and South Pacific Design Automation Conference (ASP-DAC) written by Atsushi Takahashi from the Tokyo Institute of Technology.

Another salient feature of this issue is the interview with Prof. Sung-Mo (Steve) Kang conducted by Nicola Nicolici.

Many thanks to Peter Silverberg and Kate McDevitt for The Last Byte article titled “Philadelphia Section Honors Grace Hopper.”

I hope you enjoy reading this issue of *IEEE Design&Test*. ■

A handwritten signature in black ink, appearing to read 'Partha' followed by a stylized surname.

**Partha Pratim Pande**, *Editor-in-Chief*  
Washington State University  
Pullman, WA 99164-2752 USA

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