

From the EIC

Special Issue on Design and Test of Multidie Packages



■ **THE ARTICLES IN** this issue are divided into two groups: 1) the first group belongs to the Special Issue on Design and Test of Multidie Packages and 2) the second group consists of the general interest articles.

The highlight of this issue is the Special Issue on Design and Test of Multidie Packages. Three-dimensional (3-D) integration, a breakthrough technology to achieve “More Moore and More Than Moore,” provides numerous benefits, such as better performance, lower power consumption, and wide bandwidth by vertical interconnects and 3-D stacking. TSV-based 3-D integration and 2.5-D chiplet platforms provide new avenues for compact scale-out implementations of various emerging workloads. However, various design and manufacturing test-related challenges of 3-D platforms still need to be explored. The special issue consists of five research papers and a guest editorial. We thank the guest editors, Adam Cron, Hailong Jiao, and Erik Jan Marinissen, for making this special issue possible.

In addition, we have, in this issue, six general interest articles, titled as follows: 1) “Improvement of Functional Safety of the Level-Crossing Barrier Machine by a Noninvasive Angle-Detection Method”; 2) “Datapath Extension of NPU to Support Nonconvolutional Layers Efficiently”; 3) “An Attachable Battery-Supercapacitor Hybrid for Large Pulsed Load”; 4) “RosettaStone: Connecting the Past, Present, and Future of Physical Design Research”; 5) “Testing Embedded Toggle Generation Through On-Chip IR-Drop Measurements”; and 6) “Majority-Logic-Based Self-Checking Adder in Quantum-Dot Cellular Automata.”

Many thanks to Scott Davidson for The Last Byte titled “Standing on the Shoulders of...”

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

■

Partha Pratim Pande
Editor-in-Chief
IEEE Design&Test

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