

Navigating the challenges of Physical Verification in 3DICs: From 2D to 3D solutions

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ABSTRACT:

This paper addresses critical challenges in 3DIC physical verification, including heterogeneous die stacking, TSV/interposer complexity, ESD signoff, and multi-foundry variability. These issues strain traditional EDA tools and demand new methodologies. We present Marvell's approach to overcoming these limitations through advanced signoff techniques, automation enhancements, and shift-left debugging strategies. This methodology has enabled scalable, efficient signoff across 2.5D and 3D chiplet designs.