

## **HOT TOPIC – 3D Integration or How to Scale in the 21st Century**

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3D integration offers numerous opportunities for design, and is probably the best hope for carrying ICs along (and even beyond) the path of Moore's Law in the 21st century. However, many questions still need to be answered to take advantage of 3D. First, what will become the mainstream 3D technology? Today, many technology options are proposed, but each having different cost, design and test implications. Secondly, how to make 3D designs reliable? Many unknowns still exist related to thermal load, reliability and signal integrity challenges. Finally, what about design solutions/methods and architectural modifications for 3D integration? The objective of this special session is to create a better understanding of forthcoming 3D technologies, their implication on design and test. An attempt will be made to roadmap 3D technologies and their design implications. This will enable R&D planning by design houses, EDA vendors, foundries and academia, paving the way for a widespread acceptance of 3D technologies.