



九州工業大学

ディペンダブル集積システム研究センター (DISC)

特別講演のご案内

日時: 平成29年8月25日 (金) 14:40~16:10
会場: 九州工業大学 飯塚キャンパス (福岡県飯塚市川津 680-4)
Global Communication Lounge (福利施設 1F)

講師: Dr. Stephan Eggersgluss
Independent Post-Doctoral Researcher at University of Bremen, Germany

講演題目: **Power Analysis using Transient Power Activity and Dynamic Clustering Techniques**



Test power remains a critical issue during the manufacturing test of digital circuits. Accurate power simulation is needed for ensuring the power-safety of the generated test set. Since this is a very time-consuming task, only a few test patterns can be accurately simulated. Therefore, these test patterns have to be carefully selected. We propose a new approximation metric called Transient Power Activity (TPA) to order test patterns according to their criticality. This metric is more accurate than the commonly used Weighted Switching Activity (WSA) metric but can be calculated faster than accurate simulation. Therefore, it can be effectively used to pre-select test patterns for accurate power simulation. Since the locality of the power consumption is also an important issue, we also propose a dynamic clustering technique to identify layout regions with concentrated power consumption for each test pattern. Experimental results of industrial circuits in an industrial environment shows the effectiveness of the approach.

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