



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: 令和2年12月8日(火) 16:20~17:50

形式: Zoomを利用したオンライン講演

<https://kyutech-ac-jp.zoom.us/j/96772164642?pwd=Q2ErMzNjcSsxa1NjZy9NU29aRFhUdz09>

Meeting ID: 967 7216 4642

Passcode: 963786

講師: Prof. Sybille Hellebrand (University of Paderborn, Germany)

題目: **Faster-than-at-Speed-Test - A Remedy for Early Life Failures ?!**



Weak devices often remain undetected during manufacturing test, as they do not change the circuit outputs. However, further degradation may turn them into hard defects causing early life failures, which are often associated with costly product recalls and high economic losses. The prediction of early life failures during manufacturing test or by low-cost tests in the field is thus a research goal of paramount importance. Small delay faults have been identified as indicators for weak devices, but they may be undetectable even by the most advanced procedures for automatic test pattern generation (ATPG). This presentation focuses on the opportunities and challenges of targeting such hidden delay faults by faster-than-at-speed test (FAST). In particular, techniques for efficient frequency selection and DFT measures for a built-in FAST will be presented.

Prof. Sybille Hellebrand received the Diploma degree in mathematics from the University of Regensburg, Regensburg, Germany, the Ph.D. degree in computer science from the University of Karlsruhe, Karlsruhe, Germany, and the Habilitation degree from the University of Siegen, Siegen, Germany. She held research positions with the University of Stuttgart, Stuttgart, Germany, and the University of Innsbruck, Innsbruck, Austria. Since 2004, she has been the Chair in computer engineering with the University of Paderborn, Paderborn, Germany, where she was also the Head of the Institute of Electrical Engineering and Information Technology from 2006 to 2011. In 2014, she was appointed as a Guest Professor with the Hefei University of Technology, Hefei, China. She has published numerous papers in international conferences, workshops, and journals. Her current research interests include test and diagnosis of micro-electronic systems, as well as design and synthesis of testable and dependable circuits and systems.

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