Chair for Integrated Systems
TUM Department of Electrical and Computer Engineering
Technical University of Munich

TUM

Seminar

Approximate computing Methods for FPGA-Based Image Processing

Digital image processing in professional applications places ever-higher demands so that the computing power and power consumption of FPGA devices reach their limits. Approximate computing provides a new design paradigm by performing inexact calculations instead of the actual one. As a result, fewer resources are used in the FPGA devices, more functions can be implemented, and the energy efficiency of the calculations is improved. However, approximate computing always trades off the application quality against these benefits. Hence. it's important to keep the quality degradation below a tolerable limit.

This seminar aims to identify the current trends in approximate computing on FPGA for image processing and analyzing the interesting approaches in detail.

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