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

Seminar

Application of Machine Learning Based Approaches in FPGA design Optimization

The ever-higher demands for computational capabilities of FPGA devices in the application domains like data analysis or image processing are forcing the researchers to rethink their conventional approaches to the system design. One alternative is approximate computing which performs inexact calculations instead of the actual one and brings out better performance, space and energy efficiency on hardware systems. However, it's essential to keep the application quality degradation due to such approximations below a tolerable limit. The machine learning-based approaches such as learning classifier systems or genetic algorithms play an important role in the identification of optimal FPGA design parameters which maximizes the above benefits with or without the approximations in their calculations.

This seminar aims to identify and analyze the applications of machine learning based approaches in the FPGA design optimization with or without approximations.

Contact

Manu Manuel, Room: N2116, manu.manuel@tum.de, +49 89 289 28338

Advisors

Manu Manuel