

Seminar

# Review of Design Space Exploration Techniques for Approximate FPGA/Hardware Signal Processing Systems

In recent years, numerous approximation methods have been published to bridge the gap between increasing performance demands and staggering technology improvements. Many of these methods target specific parts of an application, e.g. arithmetic execution units. Complex systems containing many different operations therefore offer lots of opportunities to apply approximations in various places. This leads to large and diverse design spaces which need to be explored in a clever way to find globally optimal configurations in the resource-quality trade-off space. The goal of this Seminar Topic is to review and summarize the state of the art for design space exploration techniques dealing with Hardware/FPGA-based signal processing systems that employ approximate computing.

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