

UNIVERSITY OF SOUTH FLORIDA

Major Research Area Paper Presentation

Survey on ASIP Synthesis by Loek Kuar Sah

For the PhD degree in Computer Science & Engineering

In the past decade, the growth of embedded systems market has seen tremendous growth and potential. ASIPs are special characteristics of application to meet the design performance cost and power requirements and reduce. Designing a processor for a specific application that is optimal in that all its design space is a big challenge for a hardware engineer. For any ASIP vendor to know how to analyze the application. We need also have a thorough knowledge of the design space of the available system. There are several ways of designing ASIP. A common approach is to take an application and abstract processor inputs and data with a set of custom instructions to meet certain performance/power/die area goals. In this paper, we survey the ASIP synthesis space and highlight the work and challenges faced though receiving some of the papers that implement ASIP Synthesis concepts in their work.

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