Abstract

In this work, we present a survey of the different task scheduling parallel programming models in order to support Out-of-Order (OoO) execution for high performance computing in an Multiprocessor System on Chip (MPSoC) environment. Thus, we review different parallel programming approaches, as well as current heterogeneous parallel programming models. In addition, we analyze different OoO execution architectures to solve the data dependency issues. The characteristics, strengths, and weaknesses are presented in all the cases. The study shows that the availability of multi-core CPUs has given new impulse to the OoO programming approach.


Index Terms

Computer Science  Programming
Keywords
Out-of-order Execution  Mpsoc  Heterogeneous Parallel Programming Model.