

Object-Oriented Codesign under Risk

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Abstract

In this paper we present an object-oriented approach to system-level codesign, focusing on managing risk and team-based problems. Our approach provides a set of early design scenarios to guide the design manager to improve time-to-market, team assignment, partitioning and to better evaluate the risks for each design option he/she may have. This is accomplished by a model of object-oriented design using stochastic linear programming in which costs, technologies, teams, and risks are represented by distribution curves. We also present some case study results.

Keywords: Optimization, System Integration, Stochastic Linear Programming.