CHAPTER 53

TECHNOLOGY
COMPUTER ENGINEERING

Doctoral Theses

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Co-Design of Reliable Hardware/Software System.
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Abstract

Developes new availability metrics, experimented on novel techniques to tackle the problem of design space exploration and developed a methodology for designing reliable multiprocessor HW/SW sytems. The work has integrated varied user-oriented availability requirements into the automeated design exploration process with a view to maintain desired levels of R&A and real-time performance. Moving away from the traditional hardware first design or virtual design approach and provided a system level approach for task allocation, assignment, scheduling, reconfiguration and optimization for the design of reliable HW/SW architectures.

Contents

1. Introduction . 2. Prior work 3.Co-design environment. 4. Availability driven model for soft real time system design. 5. Qualitative performability driven model for firm real time system design. 6. Design optimization 7. experimental results. 8. comparison with others works. 9. Conclusion and future work. resultant publications. References and appendix.