Models in system design. (English) Zbl 0876.68007


[The articles of this volume will not be indexed individually.]

The book is the ninth volume of the series Current Issues in Electronic Modeling (CIEM). This volume focuses on new methods and techniques in system design which are oriented to deal with constrains induced by volume and complexity. The volume contains 6 papers. The first paper “Modeling and Synthesis of Synchronous System-level Specifications”, focuses on communicating and concurrent systems and develops new techniques for modeling, analysis and synthesis of such systems. It is showed how the techniques can be used to solve representative problems like the protocol conversion problem and the scheduling problem for program state machines. The second paper “System Level Modeling and Hardware Architecture Trade-off”, discusses alternatives for architecture trade-off. It also argues for behavioral modeling of some trade-off situations. The third paper is titled, “Automating System Design with Conceptual Models”. It presents an approach for the automatic design of systems from specifications using conceptual graphs. Next three papers are titled “Hardware/Software Co-verification of Embedded System Designs Using Virtual System Integration”, “LIRMM: Prototyping Platform for Hardware/Software Codesign”, and “Hardware/Software System Design Based on The MCSE Methodology”, respectively. They in some way support melding software and hardware system designs. All papers are very readable written. The book is recommended to system designers, researchers, students and teachers.

Reviewer: E.Kostolansky (Bratislava)

MSC:

- 68M07 Mathematical problems of computer architecture
- 68M20 Performance evaluation, queueing, and scheduling in the context of computer systems
- 68N99 Theory of software
- 68-02 Research exposition (monographs, survey articles) pertaining to computer science

Keywords:

System design; conceptual graph; electronic modeling; protocol conversion problem; scheduling problem