Foundations of Real-Time Computing: Formal Specifications and Methods

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Book Condition: New. Publisher/Verlag: Springer, Berlin | This volume contains a selection of papers that focus on the state-of the-art in formal specification and verification of real-time computing systems. Preliminary versions of these papers were presented at a workshop on the foundations of real-time computing sponsored by the Office of Naval Research in October, 1990 in Washington, D. C. A companion volume by the title Foundations of Real-Time Computing: Scheduling and Resource Management complements this hook by addressing many of the recently devised techniques and approaches for scheduling tasks and managing resources in real-time systems. Together, these two texts provide a comprehensive snapshot of current insights into the process of designing and building real time computing systems on a scientific basis. The notion of real-time system has alternative interpretations, not all of which are intended usages in this collection of papers. Different communities of researchers variously use the term real-time to refer to either very fast computing, or immediate on-line data acquisition, or deadline-driven computing. This text is concerned with the formal specification and verification of computer software and systems whose correct performance is dependent on carefully orchestrated interactions with time, e. g. , meeting deadlines and synchronizing with clocks....

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