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Titolo	Formal Systems Specification [[electronic resource]] : The RPC-Memory Specification Case Study / / edited by Manfred Broy, Stephan Merz, Katharina Spies
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Soggetti	Computers Software engineering Computer communication systems Computer logic Theory of Computation Software Engineering Computer Communication Networks Logics and Meanings of Programs
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Nota di contenuto	The RPC-memory specification problem problem statement -- The RPC-memory case study: A synopsis -- A TLA solution to the RPC-memory specification problem -- A dynamic specification of the RPC-memory problem -- A memory module specification using composable high-level petri nets -- Constraint oriented temporal logic specification -- A functional solution to the RPC-memory specification problem -- A solution relying on the model checking of boolean transition systems -- Applying a temporal logic to the RPC-memory specification problem -- Using PVS for an assertional verification of the RPC-memory specification problem -- Specification and verification using a visual formalism on top of temporal logic -- A case study in verification based on trace abstractions -- Incremental specification with joint actions: The RPC-memory specification problem -- The methodology of modal constraints -- Tackling the RPC-memory specification

problem with I/O automata -- Using relations on streams to solve the RPC-memory specification problem -- The RPC-memory specification problem: UNITY + refinement calculus.

Sommario/riassunto

The RPC-memory specification problem was proposed by Broy and Lamport as a case study in the formal design of distributed and concurrent systems. As a realistic example typical for operating systems and hardware design, the RPC-memory problem was used as the basis for comparing various approaches to formal specification, refinement, and verification. Preliminary solutions were discussed during a workshop at Schloss Dagstuhl, Germany, in September 1994. Then an extensive discussion took place between the referees and authors. Finally 15 thoroughly revised papers were accepted for inclusion in this volume in full detail together with the problem statement and a synopsis.