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Nota di contenuto	Models and Languages -- History-Dependent Automata: An Introduction -- Mobile Distributed Programming in X-Klaim -- Scalability and Performance -- Dealing with Node Mobility in Ad Hoc Wireless Network -- Performance Analysis of Mobile Systems -- Dynamic Power Management -- A Methodology Based on Formal Methods for Predicting the Impact of Dynamic Power Management -- Dynamic Power Management Strategies Within the IEEE 802.11 Standard -- Middleware Support -- Network Swapping -- Hermes: Agent-Based Middleware for Mobile Computing.
Sommario/riassunto	This volume collects a set of papers accompanying the lectures of the 5th edition of the International School on Formal Methods for the Design of Computer, Communication and Software Systems (SFM). This series of schools addresses the use of formal methods in computer science as a prominent approach to the rigorous design of computer, communication and software systems. The main aim of the SFM series is to offer a good spectrum of current research in foundations as well as applications of formal methods, which can be of help for graduate

students and young researchers who intend to approach the field. SFM 2005 (Moby) was devoted to formal methods and tools for the design of mobile systems and mobile communication infrastructures. This volume is organized into four parts related to mobile computing, which cover models and languages, scalability and performance, dynamic power management, and middleware support. Each part is composed of two papers. The opening paper by Montanari and Pistore gives an overview of history-dependent automata, an extension of ordinary automata that overcomes their limitations in dealing with named calculi. In particular, the authors show that history-dependent automata allow for a compact representation of  $\pi$ -calculus processes, which is suitable both for theoretical investigations and for the verification of models of agents and code mobility. Bettini and De Nicola's paper presents X-Klaim, an experimental programming language specifically designed to develop distributed systems composed of several components interacting through multiple distributed tuple spaces and mobile code. Through a series of examples, the authors show that many mobile code programming paradigms can be naturally implemented by means of the considered language, which combines explicit localities as first-class data with coordination primitives.

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