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Titolo	Software Engineering for Large-Scale Multi-Agent Systems [[electronic resource]] : Research Issues and Practical Applications // edited by Alessandro Garcia, Carlos Lucena, Franco Zambonelli, Andrea Omicini, Jaelson Castro
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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2603
Disciplina	005.1
Soggetti	Artificial intelligence Software engineering Computer communication systems Computer programming Application software User interfaces (Computer systems) Artificial Intelligence Software Engineering Computer Communication Networks Programming Techniques Information Systems Applications (incl. Internet) User Interfaces and Human Computer Interaction
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Software Engineering Foundations -- Taming Agents and Objects in Software Engineering -- The Role of Roles in Designing Effective Agent Organizations -- Requirements Engineering and Software Architecture -- Requirements Engineering for Large-Scale Multi-agent Systems -- Requirements Traceability in Agent Oriented Development -- The Reflective Blackboard Pattern: Architecting Large Multi-agent Systems -- Coordination and Mobility -- A Declarative Approach to Agent-Centered Context-Aware Computing in Ad Hoc Wireless Environments

-- Engineering Mobility in Large Multi Agent Systems: A Case Study in Urban Traffic Management -- Sustainable Information Ecosystems -- Reuse -- Achieving the Promise of Reuse with Agent Components -- Application-Specific Reuse of Agent Roles -- Assisting the Development of Aspect-Based Multi-agent Systems Using the Smartweaver Approach -- Dependability -- Dynamic and Adaptive Replication for Large-Scale Reliable Multi-agent Systems -- Achieving Software Robustness via Large-Scale Multiagent Systems -- Empirical Studies and Applications -- What Can Cellular Automata Tell Us about the Behavior of Large Multi-agent Systems? -- The RETSINA MAS, a Case Study -- Secure Multi-agent Coordination in a Network Monitoring System -- Towards Monitored Data Consistency and Business Processing Based on Declarative Software Agents¹.

Sommario/riassunto

Nowadays, engineering large-scale software systems means dealing with complex systems composed of pervasive software components that move around and adapt to nondeterministic and open environments, like the Internet, in order to achieve systems design goals through the coordination of autonomously distributed services. The agent metaphor, in particular software agents and multi-agent systems (MAS), constitutes a promising approach for covering most of the software development life cycle, from conceptual modeling and requirements specification to architectural definition, design, and implementation. This book presents 17 carefully reviewed papers arranged in order to provide a coherent survey of how to exploit agent properties and MAS issues in today's software systems. The book offers the following topical sections: - software engineering foundations - requirements engineering and software architecture - coordination and mobility - reuse -dependability -empirical studies and applications.
