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Titolo	Agent-Oriented Software Engineering : Reflections on Architectures, Methodologies, Languages, and Frameworks / / edited by Onn Shehory, Arnon Sturm
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Descrizione fisica	1 online resource (331 p.)
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Soggetti	Software engineering Artificial intelligence Computer networks Computers, Special purpose Software Engineering Artificial Intelligence Computer Communication Networks Special Purpose and Application-Based Systems
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	A Brief Introduction to Agents -- Agent-Oriented Software Engineering – Revisiting the State-of-the-Art -- Application Impact of Multi-Agent Systems and Technologies: A Survey -- Multi-Agent Systems: A Software Architecture Viewpoint -- Design Patterns for Multi-Agent Systems: A Systematic Literature Review -- Agent Communication -- The Landscape of Agent-Oriented Methodologies -- Prometheus Research Directions -- O-MaSE: An Extensible Methodology for Multi-Agent Systems -- Ten Years of the INGENIAS Methodology -- A Survey of Multi-Agent Programming -- Languages and Frameworks -- GOAL: A Multi-Agent Programming Language Applied to an Exploration Game

-- Unravelling Multi-Agent Oriented Programming -- The Evolution of MAS Tools -- Design and implementation of very large agent-based systems -- Agent Zero: A Framework for Simulating and Evaluating Multi-Agent Algorithms.

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#### Sommario/riassunto

With this book, Onn Shehory and Arnon Sturm, together with further contributors, introduce the reader to various facets of agent-oriented software engineering (AOSE). They provide a selected collection of state-of-the-art findings, which combines research from information systems, artificial intelligence, distributed systems, and software engineering and covers essential development aspects of agent-based systems. The book chapters are organized into five parts. The first part introduces the AOSE domain in general, including introduction to agents and the peculiarities of software engineering for developing MAS. The second part describes general aspects of AOSE, like architectural models, design patterns, and communication. Next, part three discusses AOSE methodologies and associated research directions, and elaborates on Prometheus, O-MaSE, and INGENIAS. Part four then addresses agent-oriented programming languages. Finally, the fifth part presents studies related to the implementation of agents and multi-agent systems. The book not only provides a comprehensive review of design approaches for specifying agent-based systems, but also covers implementation aspects such as communication, standards, and tools and environments for developing agent-based systems. It is thus of interest to researchers, practitioners, and students who are interested in exploring the agent paradigm for developing software systems.

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