

1. Record Nr.	UNISA996465938803316
Titolo	Agents in Principle, Agents in Practice [[electronic resource]] : 14th International Conference, PRIMA 2011, Wollongong, Australia, November 16-18, 2011, Proceedings / / edited by David Kinny, Jane Yung-jen Hsu, Guido Governatori, Aditya Ghose
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2011
ISBN	3-642-25044-0
Edizione	[1st ed. 2011.]
Descrizione fisica	1 online resource (XIII, 534 p.)
Collana	Lecture Notes in Artificial Intelligence ; ; 7047
Disciplina	006.3
Soggetti	Artificial intelligence Computer communication systems Computer simulation Software engineering Information storage and retrieval User interfaces (Computer systems) Artificial Intelligence Computer Communication Networks Simulation and Modeling Software Engineering Information Storage and Retrieval User Interfaces and Human Computer Interaction
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Selected conference papers.
Nota di contenuto	Intro -- Title -- Preface -- Organization -- Table of Contents -- Invited Talks -- Game Theory for Security: Lessons Learned from Deployed Applications -- Tools for a Robust, Sustainable Agent Community -- From Notions to Models and Back Again, Again -- References -- Full Papers -- Coalitions and Teamwork -- A Compact Representation Scheme of Coalitional Games Based on Multi-Terminal Zero-Suppressed Binary Decision Diagrams -- Introduction -- Preliminaries -- Coalitional Games -- SCG -- BDD and ZDD -- New

Concise Representation Scheme -- MTZDD Representation Based on SCG -- Conciseness of MTZDD Representation -- Procedure of Constructing a MTZDD Representation -- Coalition Structure Generation -- Core-Related Problems -- Core-Non-emptiness -- Core-Membership -- The Cost of Stability -- Experimental Simulations -- Conclusion -- References -- Environment Characterization for Non-recontaminating Frontier-Based Robotic Exploration -- Introduction -- Related Work -- Problem Formulation -- Environment Analysis -- Environment Geometry -- Exploration Model -- Topology Tree -- Exploration Rules -- Environment Bounds -- Optimal Pursuit Strategy -- Conclusion -- References -- Learning -- Aspects of Active Norm Learning and the Effect of Lying on Norm Emergence in Agent Societies -- Introduction -- Background -- Approaches to the Learning of Norms -- Aspects of Active Learning of Agents -- Comparing Different Combinations of Learning -- The Need for Integrating the Three Aspects of Learning -- Lying in Agent Societies -- Impact of Lying When Observational and Communication-Based Learning Is Used -- Impact of Lying When All the Three Aspects of Learning Are Considered -- Discussion -- Conclusion -- References -- Mechanisms and Voting -- Strategy-Proof Mechanisms for Interdependent Task Allocation with Private Durations -- Introduction. Task Allocation and Preliminary Concepts -- Non-Negative ITA Mechanisms -- Non-profitable NN-ITA -- Profitable NN-ITA -- Interdependent Task Allocation Mechanisms -- Discussion and Related Work -- Conclusions and Future Work -- References -- Costly Voting with Sequential Participation -- Introduction -- Related Work -- Model -- Model of Voting -- Voting Mechanisms -- Optimal Voting Strategies in the m Votes to Win Mechanism -- Efficiency of the Voting Mechanisms -- Experimental Setup -- Experimental Results -- Discussions -- Concluding Remarks -- References -- Modelling and Simulation -- An Agent-Based Model for Integrated Contagion and Regulation of Negative Mood -- Introduction -- Mood Contagion and Regulation -- The Agent-Based Model -- Norm Values -- The Dynamics of Mood Contagion and Emotional Regulation -- Simulation Results -- Mathematical Analysis -- Discussion -- References -- A Framework for Agent-Based Modeling of Intelligent Goods -- Introduction -- Intelligent Goods -- Definition -- Capability Dependencies -- Services -- Agents -- Information Entities -- Single Agents -- Multiple Agents -- Locations of Agents -- Conclusions -- References -- Multi-Agent Systems for Biomedical Simulation: Modeling Vascularization of Porous Scaffolds -- Introduction -- Use of Agents in Biological Systems -- Agent-Based Modeling of Angiogenesis -- Angiogenesis -- Model Description -- Computational Challenges -- Simulation Results -- Conclusions -- References -- Group Abstraction for Large-Scale Agent-Based Social Diffusion Models with Unaffected Agents -- Introduction -- A Collective Decision Making Model -- Two Methods for Group Abstraction -- Abstraction by Weighted Averaging -- Abstraction by Determining Equilibria -- Simulation -- Evaluation of the Two Abstraction Methods -- Time Complexity Results -- Approximation Errors -- Discussion -- Conclusions. References -- Negotiation -- Towards a Quantitative Concession-Based Classification Method of Negotiation Strategies -- Introduction -- Concession Making in Negotiation -- Negotiation Model -- Concession Rate -- Method -- Experiments -- Detailed Experimental Setup -- Experimental Results -- Discussion -- Clustering -- Four Negotiation Orientations -- Related Work -- Conclusion and Future Work -- References -- Consensus Policy Based Multi-agent Negotiation -- Introduction -- The Mediation Protocol -- Generalized Pattern Search

Algorithm for Unconstrained Optimization -- Basic Operation of the Negotiation Protocol -- The Aggregation of Preferences -- OWA Operators -- Quantifier Guided Aggregation -- The Search Process -- Preferred Contract Selection in the Search Process -- Experimental Evaluation -- Conclusion -- References -- Optimization -- Distributed Lagrangian Relaxation Protocol for the Over-constrained Generalized Mutual Assignment Problem -- Introduction -- Generalized Mutual Assignment Problem -- Solutions for the Over-constrained Problem -- DisLRP with a Disposal Agent -- DisLRP with Inequality-Based Formulation -- Experiments -- Conclusion -- References -- The Effect of Congestion Frequency and Saturation on Coordinated Traffic Routing -- Introduction -- Background -- Modeling Traffic as a Constraint Optimization Problem -- Coordinated Routing -- Centralized -- Decentralized -- Simulator and Experimentation Setup -- Results -- Conclusion -- References -- Sustainability -- Coordination, Conventions and the Self-organisation of Sustainable Institutions -- Introduction -- Background -- Self-governing Institutions -- Institutionalised Power and Roles -- Dynamic Specifications -- Linear Public Good (LPG) Game -- Formal Characterisation -- Methodology -- Institutions as Dynamic Specifications -- Formal Model -- Action Language Specification. Fluents (Institutional Facts) -- Member Role Assignment (ocr1) -- Member Exclusion (ocr2) -- Specification Space -- Experimental Results -- Testbed Implementation -- Agent Strategies -- Evaluation -- Related and Further Work -- Summary and Conclusions -- References -- An Agent-Based Extensible Climate Control System for Sustainable Greenhouse Production -- Introduction -- Greenhouse Climate Control Setup -- Requirements in Greenhouse Climate Control -- Multi-Agent-Based Control System -- Negotiation-Based Coordination -- Experimental Validation -- Related Work -- Future Work -- Conclusion -- References -- Applications -- ACTraversal: Ranking Crowdsourced Commonsense Assertions and Certifications -- Introduction -- Approaches to Knowledge Verification -- ACTraversal -- Data Structure -- ACTraversal Algorithm -- Implementation -- Components -- Single Component Ranking -- Multiple Components Aggregation -- Discussion -- Conclusion -- References -- Automated Adaptation of Strategic Guidance in Multiagent Coordination -- Introduction -- Motivation -- Approach -- Problem Formulation -- Strategies -- Executing Strategies -- Evaluation -- Related Work -- Conclusions and Future Work -- References -- Early Innovation Papers -- Agent Societies and Frameworks -- Weaving a Fabric of Socially Aware Agents -- Introduction -- Social Intelligence -- Languages -- Roles and Relationships -- Interaction and Communication -- Conversations and Scenes -- Weaving the Society -- State of an Open System -- Agent Processes -- Making a Move in Group Interaction -- Conclusion -- References -- Dynamic Ad Hoc Coordination of Distributed Tasks Using Micro-Agents -- Introduction -- Android and -Agents -- Android Application Components -- Modelling Constraints of Android Application Components -- -Agents -- Integrating -Agents with Android.

Mobile App. for Ad Hoc Meetings at Unconferences -- Application Context -- Mobile App. for Ad Hoc Organisation of Spontaneous Talks -- Related Work -- Conclusion -- References -- Programming Dynamics of Multi-Agent Systems -- Introduction -- Dynamics in MAS and Challenges to Construct -- Categories of Dynamics in MAS -- An Example: Cooperative Robotic for Airport Sanitary Maintenance -- Software Engineering Issues to Develop Dynamic MAS -- An Organization-Based Approach to Programming Dynamic of MAS -- A

Core Dynamic Organization Programming Model -- Programming Mechanisms for Dynamics -- An Organization-Based Language for Programming Dynamics -- Case Study -- Related Works -- Conclusions and Future Researches -- References -- Capability Modeling of Knowledge-Based Agents for Commonsense Knowledge Integration -- Introduction -- Commonsense Knowledge Bases -- Knowledge Representation -- Commonsense Knowledge Collection -- Commonsense Reasoning -- Commonsense Knowledge Integration -- Multi-agent Framework -- Challenges -- Related Work -- Capability Model -- Representation of Capability Model -- Notations -- Capability Modeling: Choosing the Best k -- Capability Evaluation for Matchmaking -- Evaluation -- Experimental Setup -- Experimental Result -- Conclusion -- References -- Producing Enactable Protocols in Artificial Agent Societies -- Introduction -- Bisimulation -- The Netbill Protocol -- Producing the Final Enactable Protocol -- Protocol Repair -- Related Work -- Conclusion -- References -- Argumentation -- Argumentation Schemes for Collaborative Planning -- Introduction -- Deliberative Dialogue -- A Model of Plans -- Argumentation -- Example -- Discussion and Conclusions -- References -- Preference-Based Argumentation Handling Dynamic Preferences Built on Prioritized Logic Programming -- Introduction -- Preliminaries. Prioritized Logic Programs and Preferred Answer Sets.

Sommario/riassunto

This book constitutes the proceedings of the 14th International Conference on Principles and Practice in Multi-Agent Systems, PRIMA 2011, held in Wollongong, Australia, in November 2011. The 39 papers presented together with 3 invited talks were carefully reviewed and selected from numerous submissions. They focus on practical aspects of multiagent systems and are organised in topical sections on coalitions and teamwork, learning, mechanisms and voting, modeling and simulation, negotiation and coalitions, optimization, sustainability, agent societies and frameworks, argumentation, and applications.
