

12th International Conference on Autonomous Agents and Multiagent Systems 2013

(AAMAS 2013)

**Saint Paul, Minnesota, USA
6-10 May 2013**

Volume 1 of 2

ISBN: 978-1-62748-766-5

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2013) by the International Foundation for Autonomous Agents and Multiagent Systems
All rights reserved.

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact IFAAMAS
at the address below.

info@ifaamas.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Volume 1

SESSION: INVITED TALKS

Agents of Value	1
<i>Batya Friedman</i>	
A Multi-Agent Systems "Turing Challenge"	3
<i>Barbara J. Grosz</i>	
Multiagent Systems, and the Search for Appropriate Foundations	5
<i>Jeffrey S. Rosenschein</i>	

SESSION: A1 - ROBOTICS I

Multi-Robot Informative Path Planning for Active Sensing of Environmental Phenomena: A Tale of Two Algorithms	7
<i>Nannan Cao, Kian Hsiang Low, John M. Dolan</i>	
Sensor Fault Detection and Diagnosis for Autonomous Systems	15
<i>Eliahu Khalastchi, Meir Kalech, Lior Rokach</i>	
Abnormality Detection in Multiagent Systems Inspired by the Adaptive Immune System	23
<i>Danesh Tarapore, Anders Lynhe Christensen, Pedro U. Lima, Jorge Carneiro</i>	
Incrementally Biasing Visual Search Using Natural Language Input	31
<i>Evan Krause, Rehj Cantrell, Ekaterina Potapova, Michael Zillich, Matthias Scheutz</i>	
Humanoid Robots Learning to Walk Faster: From the Real World to Simulation and Back	39
<i>Alon Farchy, Samuel Barrett, Patrick Macalpine, Peter Stone</i>	

SESSION: A2 - ROBOTICS II

Collective Transport of Complex Objects by Simple Robots: Theory and Experiments	47
<i>Michael Rubenstein, Adrian Cabrera, Justin Werfel, Golnaz Habibi, James McLurkin, Radhika Nagpal</i>	
A Decision Network Based Framework for Multiagent Coalition Formation	55
<i>Sayan D. Sen, Julie A. Adams</i>	
Bayesian Interaction Shaping: Learning to Influence Strategic Interactions in Mixed Robotic Domains	63
<i>Aris Valtzanos, Subramanian Ramamoorthy</i>	
Achievable Push-Manipulation for Complex Passive Mobile Objects Using Past Experience	71
<i>Tekin Meriçli, Manuela Veloso, H. Levent Akin</i>	
Multi-UAV Motion Planning for Guaranteed Search	79
<i>Andreas Kolling, Alexander Kleiner</i>	

SESSION: A3 - ROBOTICS III

Push and Rotate: Cooperative Multi-Agent Path Planning	87
<i>Boris De Wilde, Adriaan W. Ter Mors, Cees Witteveen</i>	
Event-Processing in Autonomous Robot Programming	95
<i>Pouyan Ziafati, Mehdi Dastani, John-Jules Meyer, Leendert Van Der Torre</i>	
Cooperative Control and Modeling for Narrow Passage Traversal with an Ornithopter MAV and Lightweight Ground Station	103
<i>Ryan C. Julian, Cameron J. Rose, Humphrey Hu, Ronald S. Fearing</i>	
Synergy Graphs for Configuring Robot Team Members	111
<i>Somchaya Liemhetcharat, Manuela Veloso</i>	
Speeding-up Reinforcement Learning Through Abstraction and Transfer Learning	119
<i>Marcelo Li Koga, Valdinei Freire Da Silva, Fabio Gagliardi Cozman, Anna Helena Realí Costa</i>	

SESSION: A4 – SIMULATION

Modeling How Thinking About the Past and Future Impacts Network Traffic with the GOSMR Architecture	127
<i>Kevin Gold, Zachary J. Weber, Ben Priest, Josh Ziegler, Karen Sittig, William W. Streilein, Mark Mazumder</i>	
Homophily, Popularity and Randomness: Modelling Growth of Online Social Network	135
<i>Syed Muhammad Ali Abbas</i>	
The Impact of Culture on Crowd Dynamics: An Empirical Approach	143
<i>Natalie Fridman, Gal A. Kaminka, Avishay Zilka</i>	
Using Ego-Centered Affordances in Multi-Agent Traffic Simulation	151
<i>Feirouz Ksontini, Zahia Guessoum, René Mandiau, Stéphane Espié</i>	
A Flexible Approach to Multi-Level Agent-Based Simulation with the Mesoscopic Representation	159
<i>Laurent Navarro, Vincent Corruble, Fabien Flacher, Jean-Daniel Zucker</i>	

SESSION: A5 - DISTRIBUTED PROBLEM SOLVING

Distributed Gibbs: A Memory-Bounded Sampling-Based DCOP Algorithm	167
<i>Duc Thien Nguyen, William Yeoh, Hoong Chuin Lau</i>	
Reduction of Economic Inequality in Combinatorial Domains	175
<i>Ulle Endriss</i>	
Taxation Search in Boolean Games	183
<i>Vadim Levit, Tal Grinshpoun, Amnon Meisels, Ana L. C. Bazzan</i>	
Improved Max-Sum Algorithm for DCOP with n-ary Constraints	191
<i>Yoonheui Kim, Victor Lesser</i>	

SESSION: B1 - GAME THEORY I

Optimal Interdiction of Attack Plans	199
<i>Joshua Letchford, Yevgeniy Vorobeychik</i>	
Game-Theoretic Randomization for Security Patrolling with Dynamic Execution Uncertainty	207
<i>Albert Xin Jiang, Zhengyu Yin, Chao Zhang, Milind Tambe, Sarit Kraus</i>	
Security Scheduling for Real-World Networks	215
<i>Manish Jain, Vincent Conitzer, Milind Tambe</i>	
Security Games with Surveillance Cost and Optimal Timing of Attack Execution	223
<i>Bo An, Matthew Brown, Yevgeniy Vorobeychik, Milind Tambe</i>	
Security Games with Interval Uncertainty	231
<i>Christopher Kiekintveld, Towhidul Islam, Vladik Kreinovich</i>	

SESSION: B2 - GAME THEORY II

Avoid Fixed Pricing: Consume Less, Earn More, Make Clients Happy	239
<i>Reshef Meir, Jeffrey S. Rosenschein</i>	
A Parameterized Family of Equilibrium Profiles for Three-Player Kuhn Poker	247
<i>Duane Szafron, Richard Gibson, Nathan Sturtevant</i>	
Online Implicit Agent Modelling	255
<i>Nolan Bard, Michael Johanson, Neil Burch, Michael Bowling</i>	
A Study on the Stability and Efficiency of Graphical Games with Unbounded Treewidth	263
<i>Anisse Ismaili, Evripidis Bampis, Nicolas Maudet, Patrice Perny</i>	
Evaluating State-Space Abstractions in Extensive-Form Games	271
<i>Michael Johanson, Neil Burch, Richard Valenzano, Michael Bowling</i>	

SESSION: B3 - GAME THEORY III

Eliciting High Quality Feedback from Crowdsourced Tree Networks Using Continuous Scoring Rules	279
<i>Ratul Ray, Rohith D. Vallam, Y. Narahari</i>	
Stable Marriage and Roommate Problems with Individual-Based Stability	287
<i>Haris Aziz</i>	

Matchings with Externalities and Attitudes	295
<i>Simina Brânzei, Tomasz Michalak, Talal Rahwan, Kate Larson, Nicholas R. Jennings</i>	
Efficient Parking Allocation as Online Bipartite Matching with Posted Prices	303
<i>Reshef Meir, Yiling Chen, Michal Feldman</i>	
False-Name-Proof Matching	311
<i>Taiki Todo, Vincent Conitzer</i>	

SESSION: B4 - GAME THEORY IV

Towards a Deeper Understanding of Cooperative Equilibrium: Characterization and Complexity	319
<i>Nan Rong, Joseph Y. Halpern</i>	
Equilibrium Analysis in Cake Cutting	327
<i>Simina Brânzei, Peter Bro Miltersen</i>	
Double-Oracle Algorithm for Computing an Exact Nash Equilibrium in Zero-Sum Extensive-Form Games	335
<i>Branislav Bosansky, Christopher Kiekintveld, Viliam Lisy, Jirí Cermák, Michal Pechoucek</i>	
Computing Socially-Efficient Cake Divisions	343
<i>Yonatan Aumann, Yair Dombb, Avinatan Hassidim</i>	
No Agent Left Behind: Dynamic Fair Division of Multiple Resources	351
<i>Ian Kash, Ariel D. Procaccia, Nisarg Shah</i>	

SESSION: C1 - SOCIAL CHOICE I

On Manipulation in Multi-Winner Elections Based on Scoring Rules	359
<i>Svetlana Obraztsova, Yair Zick, Edith Elkind</i>	
Weighted Electoral Control	367
<i>Piotr Faliszewski, Edith Hemaspaandra, Lane A. Hemaspaandra</i>	
It Only Takes a Few: On the Hardness of Voting with a Constant Number of Agents	375
<i>Felix Brandt, Paul Harrenstein, Keyvan Kardel, Hans Georg Seedig</i>	
On Swap-Distance Geometry of Voting Rules	383
<i>Svetlana Obraztsova, Edith Elkind, Piotr Faliszewski, Arkadii Slinko</i>	
Empirical Analysis of Plurality Election Equilibria	391
<i>David R. M. Thompson, Omer Lev, Kevin Leyton-Brown, Jeffrey Rosenschein</i>	

SESSION: C2 - SOCIAL CHOICE II

Achieving Fully Proportional Representation is Easy in Practice	399
<i>Piotr Skowron, Piotr Faliszewski, Arkadii Slinko</i>	
The Complexity of Losing Voters	407
<i>Tomasz Perek, Piotr Faliszewski, Maria Silvia Pini, Francesca Rossi</i>	
On Elections with Robust Winners	415
<i>Dmitry Shiryayev, Lan Yu, Edith Elkind</i>	
Manipulating Two Stage Voting Rules	423
<i>Nina Narodytska, Toby Walsh</i>	
Coalitional Manipulation for Schulze's Rule	431
<i>Serge Gaspers, Thomas Kalinowski, Nina Narodytska, Toby Walsh</i>	

SESSION: C3 - SOCIAL & ORGANIZATIONAL STRUCTURE

Strategic Considerations in the Design of Committees	439
<i>Edith Elkind, Dmitrii Pasechnik, Michael Wooldridge</i>	
Learning Influence in Complex Social Networks	447
<i>Henry Franks, Nathan Griffiths, Sarabjot Singh Anand</i>	
On the Tradeoff Between Economic Efficiency and Strategyproofness in Randomized Social Choice	455
<i>Haris Aziz, Felix Brandt, Markus Brill</i>	
Organizational Design Principles and Techniques for Decision-Theoretic Agents	463
<i>Jason Sleight, Edmund H. Durfee</i>	

Designing Social Choice Mechanisms Using Machine Learning	471
<i>Lirong Xia</i>	

SESSION: C4 - NORMATIVE SYSTEMS

Emergence of Social Norms Through Collective Learning in Networked Agent Societies	475
<i>Chao Yu, Minjie Zhang, Fenghui Ren, Xudong Luo</i>	
Automated Synthesis of Normative Systems	483
<i>Javier Morales, Maite Lopez-Sanchez, Juan A. Rodriguez-Aguilar, Michael Wooldridge, Wamberto Vasconcelos</i>	
Monitoring Norm Violations in Multi-Agent Systems	491
<i>Nils Bulling, Mehdi Dastani, Max Knobbout</i>	
Agent Reasoning for Norm Compliance: A Semantic Approach	499
<i>M. Birna Van Riemsdijk, Louise A. Dennis, Michael Fisher, Koen V. Hindriks</i>	
A Real-Time Semantics for Norms with Deadlines	507
<i>Koen V. Hindriks, M. Birna Van Riemsdijk</i>	

SESSION: C5 - TEAMWORK, COALITION, COORDINATION

Dynamic Weighted Voting Games	515
<i>Edith Elkind, Dmitrii Pasechnik, Yair Zick</i>	
Taxation and Stability in Cooperative Games	523
<i>Yair Zick, Maria Polukarov, Nicholas R. Jennings</i>	
Ad Hoc Teamwork for Leading a Flock	531
<i>Katie Genter, Noa Agmon, Peter Stone</i>	
Producing Efficient Error-Bounded Solutions for Transition Independent Decentralized MDPs	539
<i>Jilles S. Dibangoye, Christopher Amato, Arnaud Doniec, François Charpillet</i>	

SESSION: D1 – PLANNING

Finding Objects Through Stochastic Shortest Path Problems	547
<i>Felipe W. Trevisan, Manuela M. Veloso</i>	
Stratified Tree Search: A Novel Suboptimal Heuristic Search Algorithm	555
<i>Levi H. S. Lelis, Sandra Zilles, Robert C. Holte</i>	
Approximate Solutions for Factored Dec-POMDPs with Many Agents	563
<i>Frans A. Oliehoek, Shimon Whiteson, Matthijs T. J. Spaan</i>	
Light at the End of the Tunnel: A Monte Carlo Approach to Computing Value of Information	571
<i>Ece Kamar, Eric Horvitz</i>	
Weighted Real-Time Heuristic Search	579
<i>Nicolás Rivera, Jorge A. Baier, Carlos Hernandez</i>	

SESSION: D2 - VIRTUAL AGENTS I

Shakespearean Spatial Rules	587
<i>Christine Talbot, G. Michael Youngblood</i>	
NetworkING: Using Character Relationships for Interactive Narrative Generation	595
<i>Julie Porteous, Fred Charles, Marc Cavazza</i>	
Efficient Intent-Based Narrative Generation Using Multiple Planning Agents	603
<i>Jonathan Teutenberg, Julie Porteous</i>	
Virtual Agent Perception Combination in Multi Agent Based Systems	611
<i>Dane M. Kuiper, Rym Z. Wenkstern</i>	
Laugh-Aware Virtual Agent and Its Impact on User Amusement	619
<i>Radoslaw Niewiadomski, Jennifer Hofmann, Jérôme Urbain, Tracey Platt, Johannes Wagner, Bilal Piot</i>	

SESSION: D3 - AUCTION & MECHANISM DESIGN I

Ishikawa Play	627
<i>Yoad Lewenberg, Zinovi Rabinovich, Jeffrey S. Rosenschein</i>	

Which Mechanism for Sponsored Search Auctions with Externalities?	635
<i>Nicola Gatti, Marco Rocco</i>	
Using Lotteries to Approximate the Optimal Revenue	643
<i>Paul W. Goldberg, Carmine Ventre</i>	
Redistribution in Online Mechanisms	651
<i>Victor Naroditskiy, Sofia Ceppi, Valentin Robu, Nicholas R. Jennings</i>	
Mechanisms for Hostile Agents with Capacity Constraints	659
<i>Prashanth Lakshmanrao Ananthapadmanabharao, Horabailu Laxminarayana Prasad, Nimit Desai, Shalabh Bhatnagar</i>	

SESSION: D4 - AUCTION & MECHANISM DESIGN II

Competing Intermediary Auctions	667
<i>Lampros C. Stavrogiannis, Enrico H. Gerding, Maria Polukarov</i>	
Mergers and Collusion in All-Pay Auctions and Crowdsourcing Contests	675
<i>Omer Lev, Maria Polukarov, Yoram Bachrach, Jeffrey S. Rosenschein</i>	
Optimal Internet Auctions with Costly Communication	683
<i>Yuqian Li, Vincent Conitzer</i>	
Mechanisms for Multi-Unit Combinatorial Auctions with a Few Distinct Goods	691
<i>Piotr Krysta, Orestis Telelis, Carmine Ventre</i>	
VCG-Equivalent in Expectation Mechanism: General Framework for Constructing Iterative Combinatorial Auction Mechanisms	699
<i>Atsushi Iwasaki, Etsushi Fujita, Taiki Todo, Miao Yao, Makoto Yokoo</i>	

SESSION: D5 - NEGOTIATION & COOPERATION

Optimizing Complex Automated Negotiation Using Sparse Pseudo-Input Gaussian Processes	707
<i>Siqi Chen, Haitham Bou Ammar, Karl Tuyls, Gerhard Weiss</i>	
Accepting Optimally in Automated Negotiation with Incomplete Information	715
<i>Tim Baarslag, Koen V. Hindriks</i>	
On the Verification and Computation of Strong Nash Equilibrium	723
<i>Nicola Gatti, Marco Rocco, Tuomas Sandholm</i>	

Volume 2

Cooperative Energy Exchange for the Efficient Use of Energy and Resources in Remote Communities	731
<i>Muddasser Alam, Sarvapali D. Ramchurn, Alex Rogers</i>	

SESSION: E1 - VIRTUAL AGENTS II

An Evaluation of the COR-E Computational Model for Affective Behaviors	745
<i>Sabrina Campano, Nicolas Sabouret, Etienne De Sevin, Vincent Corruble</i>	
A Highly Elaborative Reminiscing Virtual Agent to Enhance Student Memory of Virtual World Events	753
<i>Michelle Nicholas, Deborah Richards, Penny Van Bergen</i>	
Conflict Inside Out: A Theoretical Approach to Conflict from an Agent Point of View	761
<i>Joana Campos, Carlos Martinho, Ana Paiva</i>	
Emotional Range in Value-Sensitive Deliberation	769
<i>Cristina Battaglino, Rossana Damiano, Leonardo Lesmo</i>	
I Want to Be Your Friend: Establishing Relations with Emotionally Intelligent Agents	777
<i>João Dias, Ana Paiva</i>	

SESSION: E2 - CHALLENGES AND VISIONS

Systems Resilience: A Challenge Problem for Dynamic Constraint-Based Agent Systems	785
<i>Nicolas Schwind, Tenda Okimoto, Katsumi Inoue, Hei Chan, Tony Ribeiro, Kazuhiro Minami, Hiroshi Maruyama</i>	
Enabling Generative, Emergent Artificial Culture	789
<i>Jaroslav Kochanowicz, Tan Ah-Hwee, Daniel Thalmann</i>	

Collaborative Health Care Plan Support	793
<i>Ofra Amir, Barbara J. Grosz, Edith Law, Roni Stern</i>	
A Comprehensive Approach to Trust Management	797
<i>Sandip Sen</i>	
Curing Robot Autism: A Challenge	801
<i>Gal A. Kaminka</i>	

SESSION: E3 - TRUST, RELIABILITY & REPUTATION

A Trust Model Stemmed from the Diffusion Theory for Opinion Evaluation	805
<i>Hui Fang, Jie Zhang, Nadia M. Thalmann</i>	
An Evolutionary Model for Constructing Robust Trust Networks	813
<i>Siwei Jiang, Jie Zhang, Yew-Soon Ong</i>	
A Fuzzy Logic Based Reputation Model Against Unfair Ratings	821
<i>Siyuan Liu, Han Yu, Chunyan Miao, Alex C. Kot</i>	
Trust-Based Fusion of Untrustworthy Information in Crowdsourcing Applications	829
<i>Matteo Venanzi, Alex Rogers, Nicholas R. Jennings</i>	
Reasoning about Uncertain Information and Conflict Resolution Through Trust Revision	837
<i>Murat Sensoy, Achille Fokoue, Jeff Z. Pan, Timothy J. Norman, Yuqing Tang, Nir Oren, Katia Sycara</i>	

SESSION: E4 - FORMAL THEORIES

A Logic of Probabilistic Knowledge and Strategy	845
<i>Xiaowei Huang, Cheng Luo</i>	
Diagnosability in Concurrent Probabilistic Systems	853
<i>Xiaowei Huang</i>	
Automatic Verification of Parameterised Multi-Agent Systems	861
<i>Panagiotis Kouvaros, Alessio Lomuscio</i>	
A Synergistic and Extensible Framework for Multi-Agent System Verification	869
<i>Josie Hunter, Franco Raimondi, Neha Rungta, Richard Stocker</i>	
Hierarchical Planning about Goals and Commitments	877
<i>Pankaj R. Telang, Felipe Meneguzzi, Mumindar P. Singh</i>	

SESSION: E5 - HUMAN-ROBOT INTERACTION & REASONING

Bounded Planning for Strategic Goals with Incomplete Information and Perfect Recall	885
<i>Xiaowei Huang</i>	
Using Conflict Resolution to Inform Decentralized Learning	893
<i>Shanjun Cheng, Anita Raja, Victor Lesser</i>	
Efficient Budget Allocation with Accuracy Guarantees for Crowdsourcing Classification Tasks	901
<i>Long Tran-Thanh, Matteo Venanzi, Alex Rogers, Nicholas R. Jennings</i>	
Using Informative Behavior to Increase Engagement in the TAMER Framework	909
<i>Guangliang Li, Hayley Hung, Shimon Whiteson, W. Bradley Knox</i>	

SESSION: F1 - INNOVATIVE APPLICATIONS I

Multiuser Museum Interactives for Shared Cultural Experiences: An Agent-Based Approach	917
<i>Matthew Yee-King, Roberto Confalonieri, Dave De Jonge, Katina Hazelden, Carles Sierra, Mark D'Inverno, Leila Angoud, Nardine Osman</i>	
iCO2: Multi-User Eco-Driving Training Environment Based on Distributed Constraint Optimization	925
<i>Marconi Madruga, Helmut Prendinger</i>	
Discrete Relative States to Learn and Recognize Goals-Based Behaviors of Groups	933
<i>Jérémy Patry, Abdel-Ilhah Mouaddib, Simon Le Gloannec, Dafni Stampouli, Marc Contat</i>	
Multiagent Reinforcement Learning in a Distributed Sensor Network with Indirect Feedback	941
<i>Mitchell Colby, Kagan Tumer</i>	

Modeling Human Behavior in the Aftermath of a Hypothetical Improvised Nuclear Detonation	949
<i>Nidhi Parikh, Samarth Swarup, Paula E. Stretz, Caitlin M. Rivers, Bryan L. Lewis, Madhav V. Marathe, Stephen G. Eubank, Christopher L. Barrett, Kristian Lum, Youngyun Chungbaek</i>	

SESSION: F2 - INNOVATIVE APPLICATIONS II

Optimal Patrol Strategy for Protecting Moving Targets with Multiple Mobile Resources	957
<i>Fei Fang, Albert Xin Jiang, Milind Tambe</i>	
TESLA: An Energy-Saving Agent That Leverages Schedule Flexibility	965
<i>Jun-Young Kwak, Pradeep Varakantham, Rajiv Maheswaran, Yu-Han Chang, Milind Tambe, Burcin Becerik-Gerber, Wendy Wood</i>	
Complex-Demand Knapsack Problems and Incentives in AC Power Systems	973
<i>Lan Yu, Chi-Kin Chau</i>	
AgentSwitch: Towards Smart Energy Tariff Selection	981
<i>Sarvapali D. Ramchurn, Michael A. Osborne, Oliver Parson, Talal Rahwan, Sasan Maleki, Steve Reece, Trung D. Huynh, Muddasser Alam, Joel E. Fischer, Tom Rodden, Luc Moreau, Stephen Roberts</i>	
Two-Sided Online Markets for Electric Vehicle Charging	989
<i>Enrico H. Gerding, Sebastian Stein, Valentin Robu, Dengji Zhao, Nicholas R. Jennings</i>	

SESSION: F3 - FORMAL APPROACHES

Evolving Protocols and Agents in Multiagent Systems	997
<i>Scott N. Gerard, Mumindar P. Singh</i>	
Baseline: Practical Control Variates for Agent Evaluation in Zero-Sum Domains	1005
<i>Joshua Davidson, Christopher Archibald, Michael Bowling</i>	
Situational Preferences for BDI Plans	1013
<i>Lin Padgham, Dharendra Singh</i>	
Characterizing and Aggregating Agent Estimates	1021
<i>H. Van Dyke Parunak, Sven A. Brueckner, Lu Hong, Scott Page, Richard Rohwer</i>	
ParaMoise: Increasing Capabilities of Parallel Execution and Reorganization in an Organizational Model	1029
<i>Mateusz Guzek, Grégoire Danoy, Pascal Bouvry</i>	

SESSION: F4 - LEARNING I

Smart Exploration in Reinforcement Learning Using Absolute Temporal Difference Errors	1037
<i>Clement Gehring, Doina Precup</i>	
Addressing the Policy-bias of Q-Learning by Repeating Updates	1045
<i>Sherief Abdallah, Michael Kaisers</i>	
Teaching on a Budget: Agents Advising Agents in Reinforcement Learning	1053
<i>Lisa Torrey, Matthew E. Taylor</i>	
Object Focused Q-Learning for Autonomous Agents	1061
<i>Luis C. Cobo, Charles L. Isbell Jr., Andrea L. Thomaz</i>	
Learning Exploration Strategies in Model-Based Reinforcement Learning	1069
<i>Todd Hester, Manuel Lopes, Peter Stone</i>	

SESSION: F5 - LEARNING II

Distributed Relational Temporal Difference Learning	1077
<i>Qiangfeng Peter Lau, Mong Li Lee, Wynne Hsu</i>	
Cooperating with a Markovian Ad Hoc Teammate	1085
<i>Doran Chakraborty, Peter Stone</i>	
A Learning Agent for Heat-Pump Thermostat Control	1093
<i>Daniel Urieli, Peter Stone</i>	
Coordinating Multi-Agent Reinforcement Learning with Limited Communication	1101
<i>Chongjie Zhang, Victor Lesser</i>	

POSTER SESSION 1 - EXTENDED ABSTRACTS 1

u-Help: Supporting Helpful Communities with Information Technology	1109
<i>Andrew Koster, Jordi Madrenas, Nardine Osman, Marco Schorlemmer, Jordi Sabater-Mir, Carles Sierra</i>	
A Multi-Agent Approach for Decentralized Voltage Regulation in Power Distribution Networks within Distributed Generators	1111
<i>Fenghui Ren, Minjie Zhang, Danny Sutanto</i>	
CLEAN Rewards for Improving Multiagent Coordination in the Presence of Exploration	1113
<i>Chris Holmesparker, Adrian Agogino, Kagan Tumer</i>	
A New Approach for Continual Planning	1115
<i>Damien Pellier, Humbert Fiorino, Marc Métévier</i>	
A Distributed Protocol for Collective Decision-Making in Combinatorial Domains	1117
<i>Minyi Li, Quoc Bao Vo, Ryszard Kowalczyk</i>	
Arguments in Social Networks	1119
<i>Simone Gabbriellini, Paolo Torroni</i>	
Norm Compliance Checking	1121
<i>Jie Jiang, Virginia Dignum, Huib Aldewereld, Frank Dignum, Yao-Hua Tan</i>	
Potential-Based Reward Shaping for POMDPs	1123
<i>Adam Eck, Leen-Kiat Soh, Sam Devlin, Daniel Kudenko</i>	
Optimization Based Coordinated UGV-MAV Exploration for 2D Augmented Mapping	1125
<i>Ayush Dewan, Aravindh Mahendran, Nikhil Soni, K. Madhava Krishna</i>	
Social Agents for Serious Games	1127
<i>Joost Van Oijen, Frank Dignum</i>	
Combining Activity Scheduling and Path Planning to Populate Virtual Cities	1129
<i>Carl-Johan Jørgensen, Fabrice Lamarche</i>	
Possible and Necessary Winner Problem in Social Polls	1131
<i>Serge Gaspers, Victor Naroditskiy, Nina Naroditska, Toby Walsh</i>	
An Approach to Team Programming with Markup for Operator Interaction	1133
<i>Nathan Brooks, Ewart De Visser, Timur Chabuk, Elan Freedy, Paul Scerri</i>	
Modeling Non-Stationary Opponents	1135
<i>Pablo F. Hernandez-Leal, Enrique Munoz De Cote, L. Enrique Sucar</i>	
Mutation Operators for Cognitive Agent Programs	1137
<i>Sharmila Savarimuthu, Michael Winikoff</i>	
Envy-Ratio and Average-Nash Social Welfare Optimization in Multiagent Resource Allocation	1139
<i>Trung Thanh Nguyen, Jörg Rothe</i>	
Multi-Agent Planning by Plan Reuse	1141
<i>Daniel Borrajo</i>	
Force-Based Clustering for Transitive Identity Mapping	1143
<i>H. Van Dyke Parunak, Sven A. Brueckner</i>	
Decoupling the Multiagent Disjunctive Temporal Problem	1145
<i>James C. Boerkoel Jr., Edmund H. Durfee</i>	
Enhancing Robot Perception Using Human Teammates	1147
<i>Jean Oh, Arne Suppe, Anthony Stentz, Martial Hebert</i>	
Opponent Modeling in a PGM Framework	1149
<i>Nicolaj Sønderberg-Jeppesen, Finn V. Jensen, Yifeng Zeng</i>	
Law Enforcement in Norm-Governed Learning Agents	1151
<i>Régis Riveret, Giuseppe Contissa, Antonino Rotolo, Jeremy V. Pitt</i>	
MacGyver Virtual Agents: Using Ontologies and Hierarchies for Resourceful Virtual Human Decision-Making	1153
<i>John T. Balint, Jan M. Allbeck</i>	
A Game-Theoretic Model and Best-Response Learning Method for Ad Hoc Coordination in Multiagent Systems	1155
<i>Stefano V. Albrecht, Subramanian Ramamoorthy</i>	
Combining Event- and State-Based Norms	1157
<i>Marina De Vos, Tina Balke, Ken Satoh</i>	
SA-MAS: Self-Adaptation to Enhance Software Qualities in Multi-Agent Systems	1159
<i>Didac Gil De La Iglesia, Dany Weyns</i>	
Testing Leverage-Based Trading Strategies Under an Adaptive-Expectations Agent-Based Model	1161
<i>Elton Sbruzzi, Steve Phelps</i>	
On the Use of Teamwork Software for Multi-Robot Formation Control	1163
<i>Gal A. Kaminka, Meytal Traub, Yehuda Elmaliach, Dan Eruslimchik, Alex Fridman</i>	

Positive Results for Mechanism Design without Money	1165
<i>Richard Cole, Vasilis Gkatzelis, Gagan Goel</i>	
Learning Visual Object Models on A Robot Using Context and Appearance Cues	1167
<i>Xiang Li, Mohan Sridharan, Catie Meador</i>	
Representing and Reasoning about Communicative Conditional Commitments	1169
<i>Warda El Kholy, Mohamed El Menshawy, Jamal Bentahar, Hongyang Qu, Rachida Dssouli</i>	
The Innovative Application of Learning Companions in Virtual Singapore	1171
<i>Qiong Wu, Xiaogang Han, Han Yu, Zhiqi Shen, Chunyan Miao</i>	

POSTER SESSION 2 - EXTENDED ABSTRACTS 2

AUML Protocols: From Specification to Detailed Design	1173
<i>Yoosef Abushark, John Thangarajah</i>	
MANCaLog: A Logic for Multi-Attribute Network Cascades	1175
<i>Paulo Shakarian, Gerardo I. Simari, Robert Schroeder</i>	
On the Complexity of Undominated Core and Farsighted Solution Concepts in Coalitional Games	1177
<i>Yusen Zhan, Jun Wu, Chongjun Wang, Meilin Liu, Junyuan Xie</i>	
Discovery, Utilization, and Analysis of Credible Threats for 2X2 Incomplete Information Games in TOM	1179
<i>Jolie Olsen, Sandip Sen</i>	
Exploiting Structure and Utilizing Agent-Centric Rewards to Promote Coordination in Large Multiagent Systems	1181
<i>Chris Holmesparker, Adrian Agogino, Kagan Tumer</i>	
Time Optimized Multi-Agent Path Planning Using Guided Iterative Prioritized Planning	1183
<i>Wenjie Wang, Wooi Boon Goh</i>	
Security Games with Contagion: Handling Asymmetric Information	1185
<i>Jason Tsai, Yundi Qian, Yevgeniy Vorobeychik, Christopher Kiekintveld, Milind Tambe</i>	
A BDI Game Master Agent for Computer Role-Playing Games	1187
<i>Bao Vo Luong, John Thangarajah, Fabio Zambetta, Mahmud Hasan</i>	
JIAC V - A MAS Framework for Industrial Applications	1189
<i>Marco Lützenberger, Tobias Küster, Thomas Konnerth, Alexander Thiele, Nils Masuch, Axel Heßler, Jan Keiser, Michael Burkhardt, Silvan Kaiser, Sahin Albayrak</i>	
Goal Velocity Obstacles for Spatial Navigation of Multiple Virtual Agents	1191
<i>Jamie Snape, Dinesh Manocha</i>	
Learning to Control Complex Tensegrity Robots	1193
<i>Atil Iscen, Adrian Agogino, Vytas Sun Spiral, Kagan Tumer</i>	
RMASbench: Benchmarking Dynamic Multi-Agent Coordination in Urban Search and Rescue	1195
<i>Alexander Kleiner, Alessandro Farinelli, Sarvapali Ramchurn, Bing Shi, Fabio Maffioletti, Riccardo Reffato</i>	
Complexity of Optimal Lobbying in Threshold Aggregation	1197
<i>Ilan Nehama</i>	
Extensive-form Games with Heterogeneous Populations	1199
<i>Nicola Gatti, Fabio Panozzo, Marcello Restelli</i>	
First Impressions in User-Agent Encounters: The Impact of an Agent's Nonverbal Behavior on Users' Relational Decisions	1201
<i>Angelo Cafaro, Hannes H. Vilhjálmsson, Timothy Bickmore, Dirk Heylen, Daniel Schulman</i>	
MAMA: Multi-Agent Management of Crowds to Avoid Stampedes in Long Queues	1203
<i>Sindhu Kolli, Kamalakar Karlapalem</i>	
Governing Intelligent Virtual Agent Behaviour with Norms	1205
<i>Jeehang Lee, Tingting Li, Marina De Vos, Julian Padget</i>	
Decentralized Semantic Coordination Through Belief Propagation	1207
<i>George A. Vouros</i>	
Multi-Objective Variable Elimination for Collaborative Graphical Games	1209
<i>Diederik M. Roijers, Shimon Whiteson, Frans A. Oliehoek</i>	
Lie to Me: Virtual Agents That Lie	1211
<i>João Dias, Henrique Reis, Ana Paiva</i>	
Telescope Management for Satellite Tracking: A Decentralized Approach	1213
<i>Feyza Merve Hafızoglu, Roger Mailler</i>	
Blame on Them, Shame on Us: Combining Affective and Normative Behaviour in Intelligent Virtual Agents	1215
<i>Nuno Ferreira, Samuel Mascarenhas, Ana Paiva, John McBreen, Nick Degens, Gert Jan Hofstede</i>	

Dynamic Facts in Large Team Information Sharing (Extended Abstract)	1217
<i>Adam Eck, Leen-Kiat Soh</i>	
Towards a Truck-Driver Model Using a Hysteresis Based Analysis and Verification Approach	1219
<i>Lancelot Six, Zahia Guessoum, Julien Saunier, Sio-Song Ieng</i>	
Distributed Problem Solving in Geometrically-Structured Constraint Networks	1221
<i>Roger Mailler, Huimin Zheng</i>	
Embedding Agents in Business Applications Using Enterprise Integration Patterns	1223
<i>Stephen Cranefield, Surangika Ranathunga</i>	
Opposites Repel: The Effect of Incorporating Repulsion on Opinion Dynamics in the Bounded Confidence Model	1225
<i>Chad Crawford, Logan Brooks, Sandip Sen</i>	
The Price of Independence in Simultaneous Auctions	1227
<i>Brandona Mayer, Eric Sodomka, Amy Greenwald</i>	
Benchmarking Smart Spaces Through Autonomous Virtual Agents	1229
<i>Mario Caruso, Francesco Leotta, Massimo Mecella, Stavros Vassos</i>	

POSTER SESSION 3 - EXTENDED ABSTRACTS 3

Planning of Diverse Trajectories for UAV Control Displays	1231
<i>Jan Tozicka, David Sislák, Michal Pechoucek</i>	
A Macroscopic Model for Multi-Robot Stigmergic Coverage	1233
<i>Bijan Ranjbar-Sahraei, Gerhard Weiss, Karl Tuyls</i>	
On the Rationality of Cycling in the Theory of Moves Framework	1235
<i>Jolie Olsen, Sandip Sen</i>	
Voting with Partial Information: What Questions to Ask?	1237
<i>Ning Ding, Fangzhen Lin</i>	
Learning in Real-Time in Repeated Games Using Experts	1239
<i>Jacob W. Crandall</i>	
Agent-Based Evolving Societies	1241
<i>Lois Vanhée, Jacques Ferber, Frank Dignum</i>	
Social Capital: The Power of Influencers in Networks	1243
<i>Karthik Subbian, Dhruv Sharma, Zhen Wen, Jaideep Srivastava</i>	
Overcoming Erroneous Domain Knowledge in Plan-Based Reward Shaping	1245
<i>Kyriakos Efthymiadis, Sam Devlin, Daniel Kudenko</i>	
Preferences with Qualitative Thresholds and Methods for Individual and Collective Decisions	1247
<i>Samy Sá, João Alcântara</i>	
Segmentation of Hand Gestures Using Motion Capture Data	1249
<i>Ajay Sundar Ramakrishnan, Michael Neff</i>	
Enabling Human-Robot Collaboration via Argumentation	1251
<i>Elizabeth Sklar, Mohammad Q. Azhar, Todd Flyr, Simon Parsons</i>	
An Empirical Study of Trading Agent Robustness	1253
<i>Shai Hertz, Mariano Schain, Yishay Mansour</i>	
Scheduling Mobile Exploration Tasks for Environment Learning	1255
<i>Max Korein, Brian Coltin, Manuela Veloso</i>	
"What If There Was No Oxygen?": Responding to Hypothetical Questions in an Intelligent Tutoring Agent	1257
<i>Neil Yorke-Smith, Stijn Heymans, Vinay Chaudhri</i>	
Learning in Non-Stationary MDPs as Transfer Learning	1259
<i>M. M. Hassan Mahmud, Subramanian Ramamoorthy</i>	
Applying Distributed Optimization for QoS-Security Tradeoff in a Distributed Information System	1261
<i>Hala Mostafa, Nathaniel Soule, Nicholas Hoff, Partha Pal, Patrick Hurley</i>	
Multi-Agent RRT*: Sampling-based Cooperative Pathfinding	1263
<i>Michal Cáp, Peter Novák, Jirí Vokřínek, Michal Pechoucek</i>	
Deliberating about Voting Dimensions	1265
<i>Daniele Porello</i>	
Benchmarking Communication in Actor- and Agent-Based Languages	1267
<i>Rafael C. Cardoso, Jomi F. Hübner, Rafael H. Bordini</i>	
Decentralized Coordination via Task Decomposition and Reward Shaping	1269
<i>Atil Iscen, Kagan Tumer</i>	
Affect Detection from Semantic and Metaphorical Interpretation of Virtual Drama	1271
<i>Li Zhang, John Barnden, Ming Jiang</i>	

Multiagent POMDPs with Asynchronous Execution	1273
<i>João V. Messias, Matthijs T. J. Spaan, Pedro U. Lima</i>	
Introducing Alarms in Adversarial Patrolling Games	1275
<i>Enrique Munoz De Cote, Ruben Stranders, Nicola Basilico, Nicola Gatti, Nick Jennings</i>	
Graphical Models in Continuous Domains for Multiagent Reinforcement Learning	1277
<i>Scott Proper, Kagan Tumer</i>	
Multiagent Negotiation on Multiple Issues with Incomplete Information	1279
<i>Ronghuo Zheng, Nilanjan Chakraborty, Tinglong Dai, Katia Sycara</i>	
Addressing Hard Constraints in the Air Traffic Problem through Partitioning and Difference Rewards	1281
<i>William Curran, Adrian Agogino, Kagan Tumer</i>	
Maximizing Matching in Double-Sided Auctions	1283
<i>Jinzhong Niu, Simon Parsons</i>	
Model Based Approach to Detect Emergent Behavior in Multi-Agent Systems	1285
<i>Mohammad Moshirpour, Nariman Mani, Armin Eberlein, Behrouz H. Far</i>	
Predicting Migration and Opinion Adoption Patterns in Agent Communities	1287
<i>Sreerupa Chatterjee, Feyza Merve Hafizoglu, Sandip Sen</i>	
Bases of Social Power for Agents	1289
<i>Gonçalo Pereira, Rui Prada, Pedro A. Santos</i>	
Concurrent Reinforcement Learning as a Rehearsal for Decentralized Planning Under Uncertainty	1291
<i>Landon Kraemer, Bikramjit Banerjee</i>	
Robustness Evaluation of Incentive Mechanisms	1293
<i>Yuan Liu, Jie Zhang</i>	
Dynamic Information Transfer and Sharing Model in Agent Based Evacuation Simulations	1295
<i>Masaru Okaya, Mary Southern, Tomoichi Takahashi</i>	

POSTER SESSION 4 - EXTENDED ABSTRACTS 4

Modeling Human Adversary Decision Making in Security Games: An Initial Report	1297
<i>Thanh H. Nguyen, James Pita, Rajiv Maheswaran, Milind Tambe, Amos Azaria, Sarit Kraus</i>	
Towards Ridesharing with Passenger Transfers	1299
<i>Brian Coltin, Manuela Veloso</i>	
Resistance to Bribery when Aggregating Soft Constraints	1301
<i>Maria Silvia Pini, Francesca Rossi, Kristen Brent Venable</i>	
An Agent Design for Repeated Negotiation and Information Revelation with People	1303
<i>Noam Peled, Ya'akov Kobi Gal, Sarit Kraus</i>	
Seeding Influential Nodes in Non-Submodular Models of Information Diffusion	1305
<i>Elliot Anshelevich, Ameya Hate, Malik Magdon-Ismail</i>	
Rating Players in Games with Real-Valued Outcomes	1307
<i>Christopher Archibald, Neil Burch, Michael Bowling, Matthew Rutherford</i>	
Biasing the Behavior of Organizationally Adept Agents	1309
<i>Daniel Corkill, Chongjie Zhang, Bruno Da Silva, Yoonheui Kim, Daniel Garant, Victor R. Lesser, Xiaoqin Zhang</i>	
Memory and the Design of Migrating Virtual Agents	1311
<i>Ruth Aylett, Michael Kriegel, Iain Wallace, Elena Segura, Johanna Mercurio, Stina Nylander</i>	
Bi-Directional Double Auction for Financial Market Simulation	1313
<i>Meng Chang, Minghua He, Aniko Ekart, Xudong Luo, Shichao Zhang</i>	
A Reputation-aware Decision-making Approach for Improving the Efficiency of Crowdsourcing Systems	1315
<i>Han Yu, Zhiqi Shen, Chunyan Miao, Bo An</i>	
CHAINME: Fast Decentralized Finding of Better Supply Chains	1317
<i>Toni Peña-Alba, Jesus Cerquides, Juan A. Rodriguez-Aguilar, Meritxell Vinyals</i>	
Minimal Concession Strategy for Reaching Fair, Optimal and Stable Marriages	1319
<i>Patricia Everaere, Maxime Morge, Gauthier Picard</i>	
Reinforcement Social Learning of Coordination in Cooperative Multiagent Systems	1321
<i>Jianye Hao, Ho-Fung Leung</i>	
Generating and Ranking Commitment Protocols	1323
<i>Akin Günay, Michael Winikoff, Pinar Yolum</i>	
DeGED: An Efficient Divide-and-Coordinate Algorithm for DCOP	1325
<i>Daisuke Hatano, Katsutoshi Hirayama</i>	
Exact Algorithms for Weighted and Unweighted Borda Manipulation Problems	1327
<i>Yongjie Yang, Jiong Guo</i>	

Self-Checking Logical Agents	1329
<i>Stefania Costantini</i>	
Do Underlying Attitudes Affect Users' Subjective Experiences? The Case of an Empathic Agent	1331
<i>Janneke M. Van Der Zwaan, Virginia Dignum</i>	
Deontic Logic Programs	1333
<i>Ricardo Gonçalves, José Júlio Alferes</i>	
"Can I Ask You a Favour?" - A Relational Model of Socio-Cultural Behaviour	1335
<i>Samuel Mascarenhas, Rui Prada, Ana Paiva, Nick Degens, Gert Jan Hofstede</i>	
You Are Who You Hang Out With: Agents With Dynamic Identity	1337
<i>Joana Dimas, Rui Prada</i>	
On the Analysis of Joining Communities of Agent-Based Web Services	1339
<i>Jamal Bentahar, Babak Khosravifar, Kathleen Clacens, Christophe Goffart, Philippe Thiran</i>	
An Agent for Optimizing Airline Ticket Purchasing	1341
<i>William Groves, Maria Gini</i>	
Using Response Probability to Build System Redundancy in Multiagent Systems	1343
<i>Annie S. Wu, R. Paul Wiegand, Ramya Pradhan</i>	
Schulze and Ranked-Pairs Voting Are Fixed-Parameter Tractable to Bribe, Manipulate, and Control	1345
<i>Lane A. Hemaspaandra, Rahman Lavaee, Curtis Menton</i>	
Quality-Control Mechanism Utilizing Worker's Confidence for Crowdsourced Tasks	1347
<i>Yuko Sakurai, Tenda Okimoto, Masaaki Oka, Masato Shinoda, Maokoto Yokoo</i>	

SESSION: DEMO PAPERS

Simulating Household Activities to Lower Consumption Peaks	1349
<i>Edouard Amouroux, François Sempé, Thomas Huriaux, Nicolas Sabouret, Yvon Haradji</i>	
Divas 4.0: A Framework for the Development of Situated Multi-Agent Based Simulation Systems	1351
<i>Frederico Araujo, Junia Valente, Mohammad Al-Zinati, Dane Kuiper, Rym Zalila-Wenkstern</i>	
An Argumentation-Based Dialogue System for Human-Robot Collaboration	1353
<i>Mohammad Q. Azhar, Simon Parsons, Elizabeth Sklar</i>	
An Approach to Team Programming with Markup for Operator Interaction	1355
<i>Nathan Brooks, Ewart De Visser, Timur Chabuk, Elan Freedy, Paul Scerri</i>	
My Dream Theatre	1357
<i>Henrique Campos, Joana Campos, João Cabral, Carlos Martinho, Jeppe Herlev Nielsen, Ana Paiva</i>	
Mechanical Design and Computational Aspects for Locomotion and Reconfiguration of the ModRED Modular Robot	1359
<i>Prithviraj Dasgupta, José Baca, S. G. M. Hossain, Ayan Dutta, Carl Nelson</i>	
GAMA: Multi-Level and Complex Environment for Agent-Based Models and Simulations	1361
<i>Alexis Drogoul, Edouard Amouroux, Philippe Caillou, Benoit Gaudou, Arnaud Grignard, Nicolas Marilleau, Patrick Taillandier, Maroussia Vavasseur, Duc-An Vo, Jean-Daniel Zucker</i>	
OctoSLAM: A 3D Mapping Approach to Situational Awareness of Unmanned Aerial Vehicles	1363
<i>Joscha-David Fossel, Daniel Hennes, Sjriek Alers, Daniel Claes, Karl Tuyls</i>	
NetArg: An Agent-Based Social Simulator with Argumentative Agents	1365
<i>Simone Gabbriellini, Paolo Torroni</i>	
Volttron: An Agent Platform for the Smart Grid	1367
<i>Jereme Haack, Bora Akyol, Brandon Carpenter, Cody Tews, Lance Foglesong</i>	
A Collaborative Activity for Evaluating HAT-COM: Human-Agent Teamwork Communication Model	1369
<i>Nader Hanna, Deborah Richards</i>	
Formation Control for Cooperative Localization of MAV Swarms (Demonstration)	1371
<i>Arjun Iyer, Luis Rayas, Andrew Bennett</i>	
Learning Agent Models in SeSAM	1373
<i>Robert Junges, Franziska Klügl</i>	
Roundabout Collision Avoidance for Multiple Robots Based on Minimum Enclosing Rectangle	1375
<i>Fan Liu, Ajit Narayanan</i>	
Game-Theoretic Patrol Strategies for Transit Systems: The TRUSTS System and Its Mobile App	1377
<i>Samantha Luber, Zhengyu Yin, Francesco Delle Fave, Albert Xin Jiang, Milind Tambe, John P. Sullivan</i>	
Industrial Process Optimisation with JIAC	1379
<i>Marco Lützenberger, Tobias Küster, Thomas Konnerth, Alexander Thiele, Nils Masuch, Axel Heßler, Jan Keiser, Michael Burkhardt, Silvan Kaiser, Jakob Tonn, Sahin Albayrak</i>	
iCO₂ - Promoting Eco-Driving Practice through Multiuser Challenge Optimization	1381
<i>Marconi Madrugá, Helmut Prendinger</i>	

RMASBench: A Benchmarking System for Multi-Agent Coordination in Urban Search and Rescue	1383
<i>Fabio Maffioletti, Riccardo Reffato, Alessandro Farinelli, Alexander Kleiner, Sarvapali Ramchurn, Bing Shi</i>	
Diversity Beats Strength? A Hands-on Experience with 9X9 Go	1385
<i>Leandro Soriano Marcolino, Douglass Chen, Albert Xin Jiang, Milind Tambe</i>	
Traveller: An Intercultural Training System with Intelligent Agents	1387
<i>Samuel Mascarenhas, André Silva, Ana Paiva, Ruth Aylett, Felix Kistler, Elisabeth André, Nick Degens, Gert Jan Hofstede, Arvid Kappas</i>	
IRON: A Machine for the Automated Synthesis of Normative Systems	1389
<i>Javier Morales, Maite Lopez-Sanchez, Juan A. Rodriguez-Aguilar, Michael Wooldridge, Wamberto Vasconcelos</i>	
An MAS Negotiation Support Tool for Schema Matching	1391
<i>Hung Quoc Viet Nguyen, Xuan Hoai Luong, Zoltán Miklós, Tho Quan Thanh, Karl Aberer</i>	
A Task Complexity Assessment Tool for Single-Operator Multi-Robot Control Scenarios	1393
<i>A. Tuna Özgelen, Elizabeth Sklar</i>	
Argtrust: Decision Making with Information From Sources of Varying Trustworthiness	1395
<i>Simon Parsons, Elizabeth Sklar, Jordan Salvit, Holly Wall, Zimi Li</i>	
MUST: Multi Agent Simulation of Multi-Modal Urban Traffic	1397
<i>Deepika Pathania, Bharath Vissapragada, Nahil Jain, Apeksha Khare, Soujanya Lanka, Kamalakar Karlapalem</i>	
A Social Network Interface to an Interactive Narrative	1399
<i>Julie Porteous, Fred Charles, Marc Cavazza</i>	
AgentSwitch: Towards Smart Energy Tariff Selection	1401
<i>Sarpapali D. Ramchurn, Michael A. Osborne, Oliver Parson, Talal Rahwan, Sasan Maleki, Steve Reece, Trung D. Huynh, Muddasser Alam, Joel E. Fischer, Tom Rodden, Luc Moreau, Stephen Roberts</i>	
StiCo in Action	1403
<i>Bijan Ranjbar-Sahraei, Sjriek Alers, Karl Tuyls, Gerhard Weiss</i>	
Coordinating Maintenance Planning Under Uncertainty	1405
<i>Joris Scharpff, Matthijs T. J. Spaan, Leentje Volker, Mathijs M. De Weerd</i>	
Deployment of Multi-Agent Algorithms for Tactical Operations on UAV Hardware	1407
<i>Martin Selecky, Michal Stolba, Tomás Meiser, Michal Cáp, Antonín Komenda, Milan Rollo, Jirí Vokřínek, Michal Pechoucek</i>	
HRTeam: A Framework to Support Research on Human/Multi-Robot Interaction	1409
<i>Elizabeth Sklar, Simon Parsons, A. Tuna Özgelen, Eric Schneider, Michael Costantino, Susan L. Epstein</i>	
Diverse Trajectory Planning for UAV Control Displays	1411
<i>Jan Tozicka, Jan Balata, Zdenek Mikovec</i>	
Robin, an Empathic Virtual Buddy for Social Support	1413
<i>Janneke M. Van Der Zwaan, Virginia Dignum</i>	

SESSION: DOCTORAL CONSORTIUM ABSTRACTS

Ad Hoc Coordination in Multiagent Systems with Applications to Human-Machine Interaction	1415
<i>Stefano V. Albrecht</i>	
Information Sharing for Care Coordination	1417
<i>Ofra Amir</i>	
Designing an Automated Negotiator: Learning What to Bid and When to Stop (Doctoral Consortium)	1419
<i>Tim Baarslag</i>	
Agents with a Moral Dimension	1421
<i>Cristina Battaglino</i>	
Solving Extensive-Form Games with Double-Oracle Methods	1423
<i>Branislav Bosansky</i>	
Theory and Applications of Difference Evaluation Functions	1425
<i>Mitchell K. Colby</i>	
The Effects of Human Personality on Human-Agent Interactions	1427
<i>Hongying Du</i>	
Active Sensing in Complex Multiagent Environments	1429
<i>Adam Eck</i>	
Ad Hoc Teamwork for Leading a Flock	1431
<i>Katie Genter</i>	
Emergence of Privacy Conventions in Online Social Networks	1433
<i>Mohammad Rashedul Hasan</i>	
Dispersion and Exploration for Robot Teams	1435
<i>Elizabeth A. Jensen</i>	
OperA+: A Model for Context-Aware Organizational Interactions in Virtual Organizations	1437
<i>Jie Jiang</i>	

Reinforcement Learning for Decentralized Planning Under Uncertainty	1439
<i>Landon Kraemer</i>	
Towards the Design of a Robust Incentive Mechanism for E-Marketplaces with Limited Inventory	1441
<i>Yuan Liu</i>	
Towards "Live" Synthetic Populations for Large-Scale Realistic Multiagent Simulations	1443
<i>Nidhi Parikh</i>	
Task Allocation for Multi-Agent Systems in Dynamic Environments	1445
<i>James E. Parker</i>	
From Supply Chain Formation to Multi-Agent Coordination	1447
<i>Toni Peña-Alba</i>	
Influence of Inter-Agent Variation on System Redundancy in Multiagent Systems	1449
<i>Ramya Pradhan</i>	
Computationally Efficient Techniques for Economic Mechanisms	1451
<i>Marco Rocco</i>	
Deliberation About Preferences and Group Decisions	1453
<i>Samy Sá</i>	
Dynamic Contracting in Infrastructures	1455
<i>Joris Scharpff</i>	
Creating an Artificially Intelligent Director (AID) for Theatre and Virtual Environments	1457
<i>Christine Talbot</i>	
Artificial Culture in Artificial Societies	1459
<i>Loïs Vanhée</i>	
Multimodal Intelligent Affect Detection with Kinect	1461
<i>Yang Zhang, Li Zhang, Alamgir Hossain</i>	
Programming Autonomous Robots Using Agent Programming Languages	1463
<i>Pouyan Ziafati</i>	
Author Index	