# Table of Contents

## Introduction
Karl Tuyls (*University of Liverpool*)
John Thangarajah (*RMIT University*)

<table>
<thead>
<tr>
<th>Invited Talks</th>
<th>Applications I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Game Theory I</td>
<td>Applications II</td>
</tr>
<tr>
<td>Game Theory II</td>
<td>Applications III</td>
</tr>
<tr>
<td>Game Theory III</td>
<td>Applications IV</td>
</tr>
<tr>
<td>Game Theory IV</td>
<td>Applications V</td>
</tr>
<tr>
<td>Game Theory V</td>
<td>Social Simulation</td>
</tr>
<tr>
<td>Game Theory VI</td>
<td>Virtual Agents I</td>
</tr>
<tr>
<td>Social Choice I</td>
<td>Virtual Agents II</td>
</tr>
<tr>
<td>Social Choice II</td>
<td>Robotics I</td>
</tr>
<tr>
<td>Social Choice III</td>
<td>Robotics II</td>
</tr>
<tr>
<td>Social Choice IV</td>
<td>Robotics III</td>
</tr>
<tr>
<td>Learning I</td>
<td>Agent Societies</td>
</tr>
<tr>
<td>Learning II</td>
<td>Planning</td>
</tr>
<tr>
<td>Learning III</td>
<td>Verification</td>
</tr>
<tr>
<td>Learning IV</td>
<td>Engineering Multi Agent Systems I</td>
</tr>
<tr>
<td>Trust &amp; Cooperation</td>
<td>Engineering Multi Agent Systems II</td>
</tr>
<tr>
<td>Logic I</td>
<td>Extended Abstracts (Posters)</td>
</tr>
<tr>
<td>Logic II</td>
<td>Demonstrations</td>
</tr>
<tr>
<td>Bargaining &amp; Negotiation</td>
<td>Doctoral Mentoring Abstracts</td>
</tr>
</tbody>
</table>
Invited Talks

**Deep Learning: What's Next** (Page 1)
Andrew Ng (Stanford University)

**Autonomous Learning Agents: Layered Learning and Ad Hoc Teamwork** (Page 2)
Peter Stone (The University of Texas at Austin)

**Discrete Optimization for Agents** (Page 3)
Peter J. Stuckey (University of Melbourne)

**Am I Bovvered? Fifteen Years of Empathic Agents** (Page 4)
Ruth Aylett (Heriot-Watt University)

Game Theory I

**Complexity and Algorithms of K-implementation** (Page 5)
Yuan Deng (Duke University)
Pingzhong Tang (Tsinghua University)
Shuran Zheng (Tsinghua University)

**On the Power of Dominated Players in Team Competitions** (Page 14)
Kai Jin (Tsinghua University)
Pingzhong Tang (Tsinghua University)
Shiteng Chen (Tsinghua University)

**Network Pollution Games** (Page 23)
Eleftherios Anastasiadis (University of Liverpool)
Xiaotie Deng (Shanghai Jiao Tong University)
Piotr Krysta (University of Liverpool)
Mimming Li (City University of Hong Kong)
Han Qiao (University of Chinese Academy of Sciences)
Jinshan Zhang (University of Liverpool)

**Manipulating Citation Indices in a Social Context** (Page 32)
Chrystalla Pavlou (University of Edinburgh)
Edith Elkind (University of Oxford)

**Efficient Stabilization of Cooperative Matching Games** (Page 41)
Takehiro Ito (Tohoku University)
Naonori Kakimura (University of Tokyo)
Naoyuki Kamiyama (Kyushu University)
Yusuke Kobayashi (University of Tsukuba)
Yoshio Okamoto (University of Electro-Communications)

Game Theory II

**An Agent-Based Model of Competition Between Financial Exchanges: Can Frequent Call Mechanisms Drive Trade Away from CDAs?** (Page 50)
Zhuoshu Li (Washington University in St. Louis)
Sanmay Das (Washington University in St. Louis)

**Pareto Efficient Strategy-proof School Choice Mechanism with Minimum Quotas and Initial Endowments** (Page 59)
Ryoji Kurata (Kyushu University)
Naoto Hamada (Kyushu University)
Chia-Ling Hsu (Kyushu University)
Takamasa Suzuki (Kyushu University)
What to Verify for Optimal Truthful Mechanisms without Money (Page 68)
Diodato Ferraioli (University of Salerno)
Paolo Serafino (Teesside University)
Carmine Ventre (Teesside University)

Generalized Agent-mediated Procurement Auctions (Page 77)
Piero A. Bonatti (University of Naples "Federico II")
Marco Faella (University of Naples "Federico II")
Clemente Galdi (University of Naples "Federico II")
Luigi Sauro (University of Naples "Federico II")

A Deterministic MAB Mechanism for Crowdsourcing with Logarithmic Regret and Immediate Payments (Page 86)
Shweta Jain (Indian Institute of Science)
Ganesh Ghalme (Indian Institute of Science)
Satyanath Bhat (Indian Institute of Science)
Sujit Gujar (Indian Institute of Science)
Y. Narahari (Indian Institute of Science)

Game Theory III
Budgetary Effects on Pricing Equilibrium in Online Markets (Page 95)
Allan Borodin (University of Toronto)
Omer Lev (University of Toronto)
Tyrone Strangway (University of Toronto)

Playing Repeated Security Games with No Prior Knowledge (Page 104)
Haifeng Xu (University of Southern California)
Long Tran-Thanh (University of Southampton)
Nicholas R. Jennings (University of Southampton)

Budget Feasible Mechanisms for Dealers (Page 113)
Hau Chan (Trinity University)
Jing Chen (Stony Brook University)

Restless Poachers: Handling Exploration-Exploitation Tradeoffs in Security Domains (Page 123)
Yundi Qian (University of Southern California)
Chao Zhang (University of Southern California)
Blaskar Krishnamachari (University of Southern California)
Milind Tambe (University of Southern California)

Strategy-Proofness in the Stable Matching Problem with Couples (Page 132)
Andrew Perrault (University of Toronto)
Joanna Drummond (University of Toronto)
Fahiem Bacchus (University of Toronto)

Game Theory IV
Manipulations in Two-Agent Sequential Allocation with Random Sequences (Page 141)
Yuto Tominaga (Kyushu University)
Taiki Todo (Kyushu University)
Makoto Yokoo (Kyushu University)

Signaling in Bayesian Stackelberg Games (Page 150)
Haifeng Xu (University of Southern California)
Rupert Freeman (Duke University)
Vincent Conitzer (Duke University)
Shaddin Dughmi (University of Southern California)
Milind Tambe (University of Southern California)

Coalitional Security Games (Page 159)
Qingyu Guo (Nanyang Technological University)
Bo An (Nanyang Technological University)
Yevgeniy Vorobeychik (Vanderbilt University)
Attachment Centrality: An Axiomatic Approach to Connectivity in Networks (Page 168)
Oskar Skibski (University of Warsaw)
Talal Rahwan (Masdar Institute)
Tomasz P. Michalak (University of Oxford & University of Warsaw)
Makoto Yokoo (Kyushu University)

k-Coalitional Cooperative Games (Page 177)
Oskar Skibski (University of Warsaw)
Szymon Matejczyk (Polish Academy of Sciences)
Tomasz P. Michalak (University of Oxford & University of Warsaw)
Michael Wooldridge (University of Oxford)
Makoto Yokoo (Kyushu University)

Game Theory V
An Empirical Study on Computing Equilibria in Polymatrix Games (Page 186)
Argyrios Deligkas (University of Liverpool)
John Fearnley (University of Liverpool)
Tobenna Peter Igwe (University of Liverpool)
Rahul Savani (University of Liverpool)

Using Abstractions to Solve Opportunistic Crime Security Games at Scale (Page 196)
Chao Zhang (University of Southern California)
Victor Bucarey (Universidad de Chile)
Ayan Mukhopadhyay (Vanderbilt University)
Arunesh Sinha (University of Southern California)
Yundi Qian (University of Southern California)
Yevgeniy Vorobeychik (Vanderbilt University)
Milind Tambe (University of Southern California)

Simplifying Urban Network Security Games with Cut-Based Graph Contraction (Page 205)
Hiroaki Iwashita (Fujitsu Laboratories Ltd.)
Kotaro Ohori (Fujitsu Laboratories Ltd.)
Hirokazu Anai (Fujitsu Laboratories Ltd.)
Atsushi Iwasaki (University of Electro-Communications)

Learning Adversary Behavior in Security Games: A PAC Model Perspective (Page 214)
Arunesh Sinha (University of Southern California)
Debarun Kar (University of Southern California)
Milind Tambe (University of Southern California)

Average Controllability Measures for Solitaire Games (Page 223)
Marco Faella (University of Naples)

Game Theory VI
Local Fairness in Hedonic Games via Individual Threshold Coalitions (Page 232)
Nhan-Tam Nguyen (Heinrich-Heine-Universität Düsseldorf)
Jörg Rothe (Heinrich-Heine-Universität Düsseldorf)

Hedonic Games with Graph-restricted Communication (Page 242)
Ayumi Igarashi (University of Oxford)
Edith Elkind (University of Oxford)

Altruistic Hedonic Games (Page 251)
Nhan-Tam Nguyen (Heinrich-Heine-Universität Düsseldorf)
Anja Rey (Heinrich-Heine-Universität Düsseldorf)
Lisa Rey (Heinrich-Heine-Universität Düsseldorf)
Jörg Rothe (Heinrich-Heine-Universität Düsseldorf)
Lena Schend (Heinrich-Heine-Universität Düsseldorf)

On the Interplay between Games, Argumentation and Dialogues (Page 260)
Xiuui Fan (Nanyang Technological University)
Francesca Toni (Imperial College London)

Online Non-Preemptive Story Scheduling in Web Advertising (Page 269)
Tie-Yan Liu (Microsoft Research)
Weidong Ma (Microsoft Research)
Tao Qin (Microsoft Research)
Pingzhong Tang (Tsinghua University)
Guang Yang (Tsinghua University & CAS)
Bo Zheng (Tsinghua University)

Social Choice I

Provision-After-Wait with Common Preferences (Page 278)
Hau Chan (Trinity University)
Jing Chen (Stony Brook University)

Arguing about Voting Rules (Page 287)
Olivier Cailloux (Université Paris-Dauphine)
Ulle Endriss (University of Amsterdam)

Achieving Fully Proportional Representation by Clustering Voters (Page 296)
Piotr Faliszewski (AGH University)
Arkadii Slinko (University of Auckland)
Kolja Stahl (Technische Universität Berlin)
Nimrod Talmon (Weizmann Institute of Science)

Algorithms for Destructive Shift Bribery (Page 305)
Andrzej Kaczmarek (AGH University)
Piotr Faliszewski (AGH University)

Social Choice II

Optimal Bounds for the No-Show Paradox via SAT Solving (Page 314)
Felix Brandt (Technische Universität München)
Christian Geist (Technische Universität München)
Dominik Peters (University of Oxford)

Fault Tolerant Mechanism Design for General Task Allocation (Page 323)
Dengji Zhao (University of Southampton)
Sarvapali D. Ramchurn (University of Southampton)
Nicholas R. Jennings (University of Southampton)

False-Name-Proof Recommendations in Social Networks (Page 332)
Markus Brill (Duke University)
Vincent Conitzer (Duke University)
Rupert Freeman (Duke University)
Nisarg Shah (Carnegie Mellon University)

Parameterized Complexity of Winner Determination in Minimax Committee Elections (Page 341)
Hong Liu (Shandong University)
Jiong Guo (Shandong University)

Rationalisation of Profiles of Abstract Argumentation Frameworks (Page 350)
Stephane Airiau (Université Paris-Dauphine)
Elise Bonzon (Université Paris Descartes)
Ulle Endriss (University of Amsterdam)
Nicolas Maudet (University Pierre et Marie Curie)
Julien Rossit (University Paris Descartes)

Social Choice III

Optimal Reallocation Under Additive and Ordinal Preferences (Page 402)
Haris Aziz (Data61 & UNSW)
Péter Biró (Hungarian Academy of Sciences)
Jérôme Lang (Université Paris-Dauphine)
Julien Lesca (Université Paris-Dauphine)
Jérôme Monnot (Université Paris-Dauphine)
Group Manipulation in Judgment Aggregation (Page 411)
Sirin Botan (University of Amsterdam)
Arianna Novaro (University of Amsterdam)
Ulle Endriss (University of Amsterdam)

Algorithm Diversity - A Mechanism for Distributive Justice in a Socio-Technical MAS (Page 420)
Vivek Nallur (Trinity College Dublin)
Eamonn O'Toole (Trinity College Dublin)
Nicolas Cardozo (Trinity College Dublin)
Siobhan Clarke (Trinity College Dublin)

Social Choice IV
On the Computational Hardness of Manipulating Pairwise Voting Rules (Page 358)
Rohit Vaish (Indian Institute of Science)
Neeldhara Misra (Indian Institute of Technology Gandhinagar)
Shivani Agarwal (Indian Institute of Science)
Avrim Blum (Carnegie Mellon University)

The Echo Chamber: Strategic Voting and Homophily in Social Networks (Page 368)
Alan Tsang (University of Waterloo)
Kate Larson (University of Waterloo)

Recovering Social Networks by Observing Votes (Page 376)
Benjamin Fish (University of Illinois at Chicago)
Yi Huang (University of Illinois at Chicago)
Lev Reyzin (University of Illinois at Chicago)

Analyzing the Practical Relevance of Voting Paradoxes via Ehrhart Theory, Computer Simulations, and Empirical Data (Page 385)
Felix Brandt (Technische Universität München)
Christian Geist (Technische Universität München)
Martin Strobel (Technische Universität München)

Complexity of Finding Equilibria of Plurality Voting Under Structured Preferences (Page 394)
Edith Elkind (University of Oxford)
Evan Markakis (Athens University of Economics and Business)
Svetlana Obraztsova (Hebrew University of Jerusalem)
Piotr Skowron (University of Oxford)

Learning I
Learning from Demonstration for Shaping through Inverse Reinforcement Learning (Page 429)
Halit Bener Suay (Worcester Polytechnic Institute)
Tim Brys (Vrije Universiteit Brussel)
Matthew E. Taylor (Washington State University)
Sonia Chernova (Georgia Institute of Technology)

PAC Continuous State Online Multitask Reinforcement Learning with Identification (Page 438)
Yao Liu (Peking University)
Zhaohan Guo (Carnegie Mellon University)
Emma Brunskill (Carnegie Mellon University)

Exploration from Demonstration for Interactive Reinforcement Learning (Page 447)
Kaushik Subramanian (Georgia Institute of Technology)
Charles L. Isbell Jr. (Georgia Institute of Technology)
Andrea L. Thomaz (University of Texas at Austin)

Score-based Inverse Reinforcement Learning (Page 457)
Layla El Asri (Orange Labs & Mahuuba)
Bilal Piot (Université Lille 1)
Matthieu Geist (CentraleSupélec)
Romain Laroche (Orange Labs)
Olivier Pietquin (Université Lille 1)

Emergence of Emotional Appraisal Signals in Reinforcement Learning Agents (Page 466)
Pedro Sequeira (Universidade de Lisboa)
Learning II

Measuring the Distance Between Finite Markov Decision Processes (Page 468)
Jinhua Song (Nanjing University)
Yang Gao (Nanjing University)
Hao Wang (Nanjing University)
Bo An (Nanyang Technological University)

Boosting Nonparametric Policies (Page 477)
Yang Yu (Nanjing University)
Peng-Fei Hou (Nanjing University)
Qing Da (Nanjing University)
Yu Qian (Nanjing University)

State of the Art Control of Atari Games Using Shallow Reinforcement Learning (Page 485)
Yitao Liang (Franklin & Marshall College)
Marlos C. Machado (University of Alberta)
Erik Talvitie (Franklin & Marshall College)
Michael Bowling (University of Alberta)

Investigating Practical Linear Temporal Difference Learning (Page 494)
Adam Adam (Indiana University)
Martha White (Indiana University)

Active Advice Seeking for Inverse Reinforcement Learning (Page 503)
Phillip Odom (Indiana University)
Sriraam Natarajan (Indiana University)

Learning III

Resource Abstraction for Reinforcement Learning in Multiagent Congestion Problems (Page 512)
Kleanthis Malialis (University College London (UCL))
Sam Devlin (University of York)
Daniel Kudenko (University of York)

Local Approximation of Difference Evaluation Functions (Page 521)
Mitchell Colby (Oregon State University)
Theodore Duchow-Pressley (Oregon State University)
Jen Jen Chung (Oregon State University)
Kagan Tumer (Oregon State University)

Reinforcement Learning in Partially Observable Multiagent Settings: Monte Carlo Exploring Policies with PAC Bounds (Page 530)
Roi Ceren (University of Georgia)
Prashant Doshi (University of Georgia)
Bikramjit Banerjee (University of Southern Mississippi)

A Memetic Multi-Agent Demonstration Learning Approach with Behavior Prediction (Page 539)
Yaqing Hou (Nanyang Technological University)
Yifeng Zeng (Teesside University)
Yew-Soon Ong (Nanyang Technological University)

An Optimal Algorithm for Stochastic Matroid Bandit Optimization (Page 548)
Mohammad Sadegh Talebi (KTH Royal Institute of Technology)
Alexandre Proutiere (KTH Royal Institute of Technology)

Learning IV

A Greedy Approach to Adapting the Trace Parameter for Temporal Difference Learning (Page 557)
Martha White (Indiana University)
Adam White (Indiana University)

Source Task Creation for Curriculum Learning (Page 566)
Sanmit Narvekar (University of Texas at Austin)
Jivko Sinapov (University of Texas at Austin)
Matteo Leonetti (University of Texas at Austin)  
Peter Stone (University of Texas at Austin)  

A Survey of Opponent Modeling Techniques in Automated Negotiation  (Page 575)  
Tim Baarslag (University of Southampton)  
Mark J. C. Hendrikx (Delft University of Technology)  
Koen V. Hindriks (Delft University of Technology)  
Catholin J. Jonker (Delft University of Technology)  

Ad Hoc Teamwork by Learning Teammates’ Task  (Page 577)  
Francisco S. Melo (Universidade de Lisboa)  
Alberto Sardinha (Universidade de Lisboa)  

Revised Dollar Auctions: A Multi-Armed Bandit Approach  (Page 579)  
Marcin Waniek (University of Warsaw)  
Long Tran-Tranh (University of Southampton)  
Tomasz Michalak (University of Oxford & University of Warsaw)  

Trust & Cooperation  

A Synergy Coalition Group Based Dynamic Programming Algorithm for Coalition Formation  (Page 588)  
Luke Riley (University of Liverpool)  
Katie Atkinson (University of Liverpool)  
Paul E. Dunne (University of Liverpool)  
Terry R. Payne (University of Liverpool)  

Proactive Dynamic Distributed Constraint Optimization  (Page 597)  
Khoi D. Hoang (New Mexico State University)  
Ferdinando Fioretto (New Mexico State University)  
Ping Hou (New Mexico State University)  
Makoto Yokoo (Kyushu University)  
William Yeoh (New Mexico State University)  
Roie Zivan (Ben-Gurion University of the Negev)  

ER-DCOPs: A Framework for Distributed Constraint Optimization with Uncertainty in Constraint Utilities  (Page 606)  
Tiep Le (New Mexico State University)  
Ferdinando Fioretto (New Mexico State University)  
William Yeoh (New Mexico State University)  
Tran Cao Son (New Mexico State University)  
Enrico Pontelli (New Mexico State University)  

Adding Influencing Agents to a Flock  (Page 615)  
Katie Genter (The University of Texas at Austin)  
Peter Stone (The University of Texas at Austin)  

Towards a Cognitive Meta-Model for Adaptive Trust and Reputation in Open Multi-Agent Systems  (Page 624)  
Bruno W. P. Hoelz (University of Brasilia)  
Célia G. Ralha (University of Brasilia)  

Logic I  

Prioritised Default Logic as Rational Argumentation  (Page 626)  
Anthony P. Young (King's College London)  
Sanjay Modgil (King's College London)  
Odinaldo Rodrigues (King's College London)  

Second-order Propositional Announcement Logic  (Page 635)  
Francesco Belardinelli (Université d'Evry)  
Hans van Ditmarsch (Université de Lorraine)  
Wiebe van der Hoek (University of Liverpool)  

A Logical Theory of Belief Dynamics for Resource-Bounded Agents  (Page 644)  
Philippe Balbiani (Toulouse University)  
David Fernández-Duque (Toulouse University)
Emiliano Lorini (Toulouse University)

**On Learning Attacks in Probabilistic Abstract Argumentation** (Page 653)
Regis Riveret (Data61, CSIRO, & NICTA)
Guido Governatori (Data61, CSIRO, & NICTA)

**Verification of Multi-Agent Systems via Predicate Abstraction Against ATLK Specifications** (Page 662)
Alessio Lomuscio (Imperial College London)
Jakub Michliszyn (University of Wroclaw)

**Logic II**

**Game-Theoretic Semantics for Alternating-Time Temporal Logic** (Page 671)
Valentin Goranko (Stockholm University & University of Johannesburg)
Annti Kuusisto (University of Bremen)
Raine Rönholm (University of Tampere)

**Constrained Social-Energy Minimization for Multi-Party Sharing in Online Social Networks** (Page 680)
Sarah Rajtmajer (The Pennsylvania State University)
Anna Squicciarini (The Pennsylvania State University)
Christopher Griffin (United States Naval Academy)
Sushama Karumanchi (The Pennsylvania State University)
Alpana Tyagi (The Pennsylvania State University)

**Concurrent Multi-Player Parity Games** (Page 689)
Vadim Malvone (Università degli studi di Napoli Federico II)
Aniello Murano (Università degli studi di Napoli Federico II)
Loredana Sorrentino (Università degli studi di Napoli Federico II)

**Graded Strategy Logic: Reasoning about Uniqueness of Nash Equilibria** (Page 698)
Benjamin Aminof (Technische Universität Wien)
Vadim Malvone (Università degli studi di Napoli Federico II)
Aniello Murano (Università degli studi di Napoli Federico II)
Sasha Rubin (Università degli studi di Napoli Federico II)

**Expressiveness and Nash Equilibrium in Iterated Boolean Games** (Page 707)
Julian Gutierrez (University of Oxford)
Paul Harrenstein (University of Oxford)
Giuseppe Perelli (University of Oxford)
Michael Wooldridge (University of Oxford)

**Bargaining & Negotiation**

**The Misrepresentation Game: How to Win at Negotiation While Seeming Like a Nice Guy** (Page 728)
Jonathan Gratch (University of Southern California)
Zahra Nazari (University of Southern California)
Emmanuel Johnson (University of Southern California)

**Mobile Crowdsensing with Mobile Agents: JAAMAS Extended Abstract** (Page 738)
Teemu Leppänen (University of Oulu)
Jóse Álvarez Lacasia (University of Tokyo)
Yoshito Tobe (Aoyama Gakuin University)
Kaoru Sezaki (University of Tokyo)
Jukka Riekki (University of Oulu)

**Applications I**

**Using Social Networks to Aid Homeless Shelters: Dynamic Influence Maximization under Uncertainty** (Page 740)
Amulya Yadav (University of Southern California)
Hau Chan (Trinity University)
Albert Xin Jiang (Trinity University)
Haifeng Xu (University of Southern California)
Eric Rice \textit{(University of Southern California)}
Milind Tambe \textit{(University of Southern California)}

**Optimal Pricing for Efficient Electric Vehicle Charging Station Management** (Page 749)
Yanhai Xiong \textit{(Nanyang Technological University)}
Jiarui Gan \textit{(Nanyang Technological University)}
Bo An \textit{(Nanyang Technological University)}
Chunyan Miao \textit{(Nanyang Technological University)}
Yeng Chai Soh \textit{(Nanyang Technological University)}

**Best Action Selection in a Stochastic Environment** (Page 758)
Yingce Xia \textit{(University of Science and Technology of China)}
Tao Qin \textit{(Microsoft Research)}
Nenghai Yu \textit{(University of Science and Technology of China)}
Tie-Yan Liu \textit{(Microsoft Research)}

**CAPTURE: A New Predictive Anti-Poaching Tool for Wildlife Protection** (Page 767)
Thanh H. Nguyen \textit{(University of Southern California)}
Arunesh Sinha \textit{(University of Southern California)}
Shahrzad Gholami \textit{(University of Southern California)}
Andrew Plumptre \textit{(Wildlife Conservation Society)}
Lucas Joppa \textit{(Microsoft Research)}
Milind Tambe \textit{(University of Southern California)}
Margaret Driciru \textit{(Uganda Wildlife Authority)}
Fred Wanyama \textit{(Uganda Wildlife Authority)}
Aggrey Rwetsiba \textit{(Uganda Wildlife Authority)}
Rob Critchlow \textit{(The University of York)}
Colin M. Beale \textit{(The University of York)}

**Avicaching: A Two Stage Game for Bias Reduction in Citizen Science** (Page 776)
Yexiang Xue \textit{(Cornell University)}
Ian Davies \textit{(Cornell University)}
Daniel Fink \textit{(Cornell University)}
Christopher Wood \textit{(Cornell University)}
Carla P. Gomes \textit{(Cornell University)}

**Applications II**

**Assessing Maritime Customs Process Re-Engineering using Agent-Based Simulation** (Page 786)
F. Jordan Srour \textit{(Lebanese American University)}
Neil Yorke-Smith \textit{(American University of Beirut)}

**Multi-Agent System in Practice: When Research Meets Reality** (Page 796)
Marco Lützenberger \textit{(Technische Universität Berlin)}
Tobias Küster \textit{(Technische Universität Berlin)}
Nils Masuch \textit{(Technische Universität Berlin)}
Johannes Fähndrich \textit{(Technische Universität Berlin)}

**120 Million Agents Self-Organize into 6 Million Firms: A Model of the U.S. Private Sector** (Page 806)
Robert L. Axtell \textit{(George Mason University)}

**Applications III**

**Load Forecasting in a Smart Grid through Customer Behaviour Learning Using L1-Regularized Continuous Conditional Random Fields** (Page 817)
Xishun Wang \textit{(University of Wollongong)}
Minjie Zhang \textit{(University of Wollongong)}
Fenghui Ren \textit{(University of Wollongong)}

**An MDP-Based Winning Approach to Autonomous Power Trading: Formalization and Empirical Analysis** (Page 827)
Daniel Urieli \textit{(University of Texas at Austin)}
Peter Stone \textit{(University of Texas at Austin)}

**Decentralized Multi-Project Scheduling via Multi-Unit Combinatorial Auction** (Page 836)
Wen Song \textit{(Nanyang Technological University)}
Applications IV

Modeling Autobiographical Memory in Human-Like Autonomous Agents  (Page 845)
Donghun Kang (Nanyang Technological University)
Jie Zhang (Nanyang Technological University)
Hui Xi (Rolls-Royce Singapore Pte Ltd)

Variational Inference with Agent-Based Models  (Page 854)
Di Wang (Nanyang Technological University)
Ah-Hwee Tan (Nanyang Technological University)
Chunyan Miao (Nanyang Technological University)

Affect-Aware Student Models for Robot Tutors  (Page 864)
Samuel Spaulding (Massachusetts Institute of Technology)
Goren Gordon (Tel Aviv University)
Cynthia Breazeal (Massachusetts Institute of Technology)

Applications V

Limiting the Influence of Low Quality Information in Community Sensing  (Page 873)
Goran Radanovic (École Polytechnique Fédérale de Lausanne)
Boi Faltings (École Polytechnique Fédérale de Lausanne)

Bid2Charge: Market User Interface Design for Electric Vehicle Charging  (Page 882)
Sebastian Stein (University of Southampton)
Enrico H. Gerding (University of Southampton)
Adrian Nedea (University of Southampton)
Avi Rosenfeld (Jerusalem College of Technology)
Nicholas R. Jennings (University of Southampton)

Social Simulation

Semi-Automated Construction of Decision-Theoretic Models of Human Behavior  (Page 891)
David V. Pynadath (University of Southern California)
Heather Rosoff (University of Southern California)
Richard S. John (University of Southern California)

Cooperation Emergence under Resource-Constrained Peer Punishment  (Page 900)
Samhar Mahmoud (King’s College London)
Simon Miles (King’s College London)
Michael Luck (King’s College London)

Modeling Culture in Intelligent Virtual Agents - From Theory to Implementation (JAAMAS Extended Abstract)  (Page 909)
Samuel Mascarenhas (University of Lisbon)
Nick Degens (Hanze University of Applied Science)
Ana Paiva (University of Lisbon)
Rui Prada (University of Lisbon)
Gert Jan Hofstede (Wageningen University)
Adrie Beulens (Wageningen University)
Ruth Aylett (Heriot-Watt University)

Virtual Agents I

The Effects of Interrupting Behavior on Interpersonal Attitude and Engagement in Dyadic Interactions  (Page 911)
Angelo Cafaro (Université Paris-Saclay)
Nadine Glas (Université Paris-Saclay)
Catherine Pelachaud (Université Paris-Saclay)

SOCRATES: from SOCial Relation to ATtitude ExpressionS  (Page 921)
Florian Pecune (Université Paris-Saclay)
Magalie Ochs (Aix Marseille Université & Université de Toulon)
Stacy Marsella (Northeastern University)
Catherine Pelachaud (Université Paris-Saclay)

**I Remember You! Interaction with Memory for an Empathic Virtual Robotic Tutor** (Page 931)
Helen Hastie (Heriot-Watt University)
Mei Yii Lim (Heriot-Watt University)
Srini Janarthanam (Heriot-Watt University)
Amol Deshmukh (Heriot-Watt University)
Ruth Aylett (Heriot-Watt University)
Mary Ellen Foster (University of Glasgow)
Lynne Hall (University of Sunderland)

**Goal Inference Improves Objective and Perceived Performance in Human-Robot Collaboration** (Page 940)
Chang Liu (University of California, Berkeley)
Jessica B. Hamrick (University of California, Berkeley)
Jaime F. Fisac (University of California, Berkeley)
Anca D. Dragan (University of California, Berkeley)
J. Karl Hedrick (University of California, Berkeley)
S. Shankar Sastry (University of California, Berkeley)
Thomas L. Griffiths (University of California, Berkeley)

"Do as I Say, Not as I Do:" Challenges in Delegating Decisions to Automated Agents (Page 949)
Celso M. de Melo (University of Southern California)
Stacy Marsella (Northeastern University)
Jonathan Gratch (University of Southern California)

**Virtual Agents II**

**A Need for Speed: Adapting Agent Action Speed to Improve Task Learning from Non-Expert Humans** (Page 957)
Bei Peng (Washington State University)
James MacGlashan (Brown University)
Robert Loftin (North Carolina State University)
Michael L. Littman (Brown University)
David L. Roberts (North Carolina State University)
Matthew E. Taylor (Washington State University)

**Optimal Testing for Crowd Workers** (Page 966)
Jonathan Bragg (University of Washington)
NONE-REMOVE Mausam (Indian Institute of Technology)
Daniel S. Weld (University of Washington)

**Transfer Learning for User Adaptation in Spoken Dialogue Systems** (Page 975)
Aude Genevay (Orange Labs)
Romain Laroche (Orange Labs)

**Don't Lose Sight of the Forest: Why the Big Picture of Social Intelligence is Essential** (Page 984)
Emma Norling (Manchester Metropolitan University)

**Robotics I**

**On Decentralized Coordination for Spatial Task Allocation and Scheduling in Heterogeneous Teams** (Page 988)
Eduardo Feo Flushing (Dalle Molle Institute for Artificial Intelligence (IDSIA))
Luca M. Gambardella (Dalle Molle Institute for Artificial Intelligence (IDSIA))
Gianni A. Di Caro (Dalle Molle Institute for Artificial Intelligence (IDSIA))

**The Impact of POMDP-Generated Explanations on Trust and Performance in Human-Robot Teams** (Page 997)
Ning Wang (University of Southern California)
David V. Pynadath (University of Southern California)
Susan G. Hill (U.S. Army Research Laboratory)

**Robotic Agents Representing, Reasoning, and Executing Wiping Tasks for Daily Household Chores** (Page 1006)
Daniel Leidner (German Aerospace Center (DLR))
Robots I

Analogical Generalization of Actions from Single Exemplars in a Robotic Architecture (Page 1015)
Wissam Bejjani (German Aerospace Center (DLR))
Alin Albu-Schaeffer (German Aerospace Center (DLR))
Michael Beetz (University of Bremen)

Online Planning for Collaborative Search and Rescue by Heterogeneous Robot Teams (Page 1024)
Zoltán Beck (University of Southampton)
Luke Teacy (University of Southampton)
Alex Rogers (University of Oxford)
Nicholas R. Jennings (University of Southampton)

Online Planning for Collaborative Search and Rescue by Heterogeneous Robot Teams (Page 1024)
Jason R. Wilson (Tufts University)
Evan Krause (Tufts University)
Matthias Scheutz (Tufts University)
Morgan Rivers (Tufts University)

Robots II

Expectation-Maximization for Inverse Reinforcement Learning with Hidden Data (Page 1034)
Kenneth Bogert (University of Georgia)
Jonathan Feng-Shun Lin (University of Waterloo)
Prashant Doshi (University of Georgia)
Dana Kulic (University of Waterloo)

Unsupervised Learning of Qualitative Motion Behaviours by a Mobile Robot (Page 1043)
Paul Duckworth (University of Leeds)
Yiannis Gatsoulis (University of Leeds)
Ferdian Jovan (University of Birmingham)
Nick Hawes (University of Birmingham)
David C. Hogg (University of Leeds)
Anthony G. Cohn (University of Leeds)

Directing Policy Search with Interactively Taught Via-Points (Page 1052)
Yannick Schroecker (Georgia Tech)
Henri Ben Amor (Arizona State University)
Andrea Thomaz (University of Texas at Austin)

Robots III

Inverse Reinforcement Learning from Failure (Page 1060)
Kyriacos Shiarlis (University of Amsterdam)
Joao Messias (University of Amsterdam)
Shimon Whiteson (University of Oxford)

Planning with Resource Conflicts in Human-Robot Cohabitation (Page 1069)
Tathagata Chakraborti (Arizona State University)
Yu Zhang (Arizona State University)
David E. Smith (NASA Ames Research Center)
Subbarao Kambhampati (Arizona State University)

Iterated Multi-Robot Auctions for Precedence-Constrained Task Scheduling (Page 1078)
Mitchell McIntire (University of Minnesota)
Ernesto Nunes (University of Minnesota)
Maria Gini (University of Minnesota)

Distributed Formation Control of Quadrotors under Limited Sensor Field of View (Page 1087)
Duarte Dias (École Polytechnique Fédérale de Lausanne & Universidade de Lisboa)
Pedro Urbano Lima (Universidade de Lisboa)
Alcherio Martinoli (École Polytechnique Fédérale de Lausanne)

Agent Societies

Custard: Computing Norm States Over Information Stores (Page 1096)
Amit K. Chopra (Lancaster University)
Munindar P. Singh (North Carolina State University)

Ethical Judgment of Agents’ Behaviors in Multi-Agent Systems (Page 1106)
Personalised Automated Assessments (Page 1115)
Patricia Gutierrez (IIIA-CSIC)
Nardine Osman (IIIA-CSIC)
Carme Roig (INS Torras i Bages)
Carles Sierra (IIIA-CSIC)

Personalized Hitting Time for Informative Trust Mechanisms Despite Sybils (Page 1124)
Brandon K. Liu (Harvard University)
David C. Parkes (Harvard University)
Sven Seuken (University of Zurich)

A Framework for Organization-Aware Agents (JAAMAS Extended Abstract) (Page 1133)
Andreas Schmidt Jensen (Technical University of Denmark)
Virginia Dignum (Delft University of Technology)
Jørgen Villadsen (Technical University of Denmark)

Planning
Discovering Underlying Plans Based on Distributed Representations of Actions (Page 1135)
Xin Tian (Sun Yat-sen University)
Hankz Hankui Zhuo (Sun Yat-Sen University)
Subbarao Kambhampati (Arizona State University)

Optimal Target Assignment and Path Finding for Teams of Agents (Page 1144)
Hang Ma (University of Southern California)
Sven Koenig (University of Southern California)

Argumentation-Based Multi-Agent Decision Making with Privacy Preserved (Page 1153)
Yang Gao (Chinese Academy of Sciences)
Francesca Toni (Imperial College London)
Hao Wang (Chinese Academy of Sciences)
Fanjiang Xu (Chinese Academy of Sciences)

A Value Equivalence Approach for Solving Interactive Dynamic Influence Diagrams (Page 1162)
Ross Conroy (Teesside University)
Yifeng Zeng (Teesside University)
Marc Cavazza (University of Kent)
Jing Tang (Teesside University)
Yinghui Pan (Jiangxi University of Finance and Economics)

Regular Strategies and Strategy Improvement: Efficient Tools for Solving Large Patrolling Problems (Page 1171)
Antonín Kučera (Masaryk University)
Tomáš Lamser (Masaryk University)

Verification
Multi-Valued Verification of Strategic Ability (Page 1180)
Wojciech Jamroga (Polish Academy of Sciences)
Beata Konikowska (Polish Academy of Sciences)
Wojciech Penczek (Polish Academy of Sciences)

Automatic Verification of Multi-Agent Systems in Parameterised Grid-Environments (Page 1190)
Benjamin Aminof (Technische Universität Wien)
Aniello Murano (Università degli Studi di Napoli Federico II)
Sasha Rubin (Università degli Studi di Napoli Federico II)
Florian Zuleger (Technische Universität Wien)

Formal Verification of Opinion Formation in Swarms (Page 1200)
Panagiotis Kouvaros (Imperial College London)
Alessio Lomuscio (Imperial College London)

Verifying Security Properties in Unbounded Multiagent Systems (Page 1209)
Ioana Boureanu (Imperial College London)
Panagiotis Kouvaros (Imperial College London)
Alessio Lomuscio (Imperial College London)

A Lazy Approach to Temporal Epistemic Logic Model Checking
Alessandro Cimatti (Fondazione Bruno Kessler)
Marco Gario (Fondazione Bruno Kessler)
Stefano Tonetta (Fondazione Bruno Kessler)

Engineering Multi Agent Systems I
Action-Level Intention Selection for BDI Agents
Yuan Yao (University of Nottingham)
Brian Logan (University of Nottingham)

Automating Failure Detection in Cognitive Agent Programs
Vincent J. Koeman (Delft University of Technology)
Koen V. Hindriks (Delft University of Technology)
Catholijn M. Jonker (Delft University of Technology)

Requirements Specification in the Prometheus Methodology via Activity Diagrams (JAAMAS Extended Abstract)
Yoosef Abushark (RMIT University)
John Thangarajah (RMIT University)
Tim Miller (University of Melbourne)
Michael Winikoff (University of Otago)
James Harland (RMIT University)

GPU Delegation: Toward a Generic Approach for Developing MABs Using GPU Programming
Emmanuel Hermellin (University of Montpellier)
Fabien Michel (University of Montpellier)

Engineering Multi Agent Systems II
Engineering Commitment-based Business Protocols with the 2CL Methodology (JAAMAS Extended Abstract)
Matteo Baldoni (University of Torino)
Cristina Baroglio (University of Torino)
Elisa Marengo (University of Bozen-Bolzano)
Viviana Patti (University of Torino)
Federico Capuzzimati (University of Torino)

Commitments and Interaction Norms in Organisations (JAAMAS Extended Abstract)
Mehdi Dastani (Utrecht University)
Leendert van der Torre (University of Luxembourg)
Neil Yorke-Smith (American University of Beirut)

Dynamically Generated Commitment Protocols in Open Systems (JAAMAS Extended Abstract)
Akin Güney (Nanyang Technological University)
Michael Winikoff (University of Otago)
Pinar Yolum (Bogazici University)

Extended Abstracts
Decision Theoretic Norm-Governed Planning (Extended Abstract)
Luca Gasparini (University Of Aberdeen)
Timothy J. Norman (University Of Aberdeen)
Martin J. Kollingbaum (University Of Aberdeen)
Liang Chen (University Of West London)

Egalitarianism of Random Assignment Mechanisms (Extended Abstract)
Haris Aziz (Data61 & UNSW)
Aris Filos-Ratsikas (University of Oxford)
Jiashu Chen (UNSW)
Simon Mackenzie (Data61 & UNSW)
Strategy-Proof Data Auctions with Negative Externalities (Extended Abstract) (Page 1269)
Xiang Wang (Shanghai Tiao Tong University)
Zhenzhe Zheng (Shanghai Tiao Tong University)
Fan Wu (Shanghai Tiao Tong University)
Xiaojue Dong (Shanghai Tiao Tong University)
Shaofan Tang (University of Texas at Dallas)
Guihai Chen (Shanghai Tiao Tong University)

Expectedness in Human-Robot Collaboration (Extended Abstract) (Page 1271)
Mahni Shayganfar (Worcester Polytechnic Institute)
Charles Rich (Worcester Polytechnic Institute)
Candace L. Sidner (Worcester Polytechnic Institute)

How Testable are BDI Agents? An Analysis of Branch Coverage (Extended Abstract) (Page 1273)
Michael Winikoff (University of Otago)

Simulation of Agent-rescuer Behaviour in Emergency Based on Modified Fuzzy Clustering (Extended Abstract) (Page 1275)
Armen L. Beklaryan (National Research University Higher School of Economics)
Andranik S. Akopov (National Research University Higher School of Economics)

Digital Good Exchange (Extended Abstract) (Page 1277)
Wenyi Fang (Tsinghua University)
Pingzhong Tang (Tsinghua University)
Song Zuo (Tsinghua University)

Distributed Search for Pure Nash Equilibria in Graphical Games (Extended Abstract) (Page 1279)
Omer Litov (Ben-Gurion University of the Negev)
Amnon Meisels (Ben-Gurion University of the Negev)

Neuro-Evolution for Multi-Agent Policy Transfer in RoboCup Keep-Away (Extended Abstract) (Page 1281)
Sabre Didi (University of Cape Town)
Geoff Nitschke (University of Cape Town)

Hierarchical Approach to Transfer of Control in Semi-Autonomous Systems (Extended Abstract) (Page 1285)
Kyle Hollins Wray (University of Massachusetts, Amherst)
Luis Pineda (University of Massachusetts, Amherst)
Shlomo Zilberstein (University of Massachusetts, Amherst)

A Hybrid Approach for Detecting Fraudulent Medical Insurance Claims (Extended Abstract) (Page 1287)
Chenfei Sun (Shandong University)
Yuliang Shi (Shandong University)
Qingzhong Li (Shandong University)
Lizhen Cui (Shandong University)
Han Yu (Nanyang Technological University)
Chunyan Miao (Nanyang Technological University)

Reinforcement Learning Algorithms for Regret Minimization in Structured Markov Decision Processes (Extended Abstract) (Page 1289)
Prabuchandran K. J. (Indian Institute of Science)
Tejas Bodas (IIT Bombay)
Theja Tulabandhula (Xerox Research Centre India)

Game-Theoretic Modeling of Transmission Line Reinforcements with Distributed Generation (Extended Abstract) (Page 1291)
Merlinda Andoni (Heriot-Watt University)
Valentin Robu (Heriot-Watt University)

Covering Number: Analyses for Approximate Continuous-state POMDP Planning (Extended Abstract)
Abstract) (Page 1293)
Zongzhang Zhang (Soochow University)
Quan Liu (Soochow University)

Trust Management for Composite Services in Distributed Multi-Agent Systems with Indirect Ratings (Extended Abstract) (Page 1295)
Tung Doan Nguyen (Auckland University of Technology)
Quan Bai (Auckland University of Technology)

Social Welfare in One-Sided Matching Mechanisms (Extended Abstract) (Page 1297)
George Christodoulou (University of Liverpool)
Aris Filos-Ratsikas (University of Oxford)
Soren Kristoffer Stil Frederiksen (Aarhus University)
Paul W. Goldberg (University of Oxford)
Jie Zhang (University of Oxford)
Jinshan Zhang (University of Liverpool)

Bribery in k-Approval and k-Veto Under Partial Information (Extended Abstract) (Page 1299)
Dirk Briskorn (Bergische Universitaet Wuppertal)
Gábor Erdélyi (University of Siegen)
Christian Reger (University of Siegen)

Local Search on Trees and a Framework for Automated Construction Using Multiple Identical Robots (Extended Abstract) (Page 1301)
Trevor Cai (University of Southern California)
David Y. Zhang (Google)
T. K. Satish Kumar (University of Southern California)
Sven Koenig (University of Southern California)
Nora Ayanian (University of Southern California)

Multi-Agent Continuous Transportation with Online Balanced Partitioning (Extended Abstract) (Page 1303)
Chao Wang (National University of Singapore)
Somchaya Liemhetcharat (Agency for Science, Technology and Research)
Kian Hsiang Low (National University of Singapore)

Single Item Auctions with Discrete Action Spaces (Extended Abstract) (Page 1305)
Yicheng Liu (Tsinghua University)
Pingzhong Tang (Tsinghua University)

An Adaptive Learning Framework for Efficient Emergence of Social Norms (Extended Abstract) (Page 1307)
Chao Yu (Dalian University of Technology)
Hongtao Lv (Dalian University of Technology)
Sandip Sen (The University of Tulsa)
Jianye Hao (Tianjin University)
Fenghui Ren (University of Wollongong)
Rui Liu (Dalian University of Technology)

Learning From the Wizard: Programming Social Interaction through Teleoperated Demonstrations (Extended Abstract) (Page 1309)
W. Bradley Knox (Massachusetts Institute of Technology)
Samuel Spaulding (Massachusetts Institute of Technology)
Cynthia Breazeal (Massachusetts Institute of Technology)

Budget-Constrained Reasoning in Agent Computational Environments (Extended Abstract) (Page 1311)
Stefania Costantini (Università di L'Aquila)
Andrea Formisano (Università di Perugia & GNCS-INdAM)

Relaxation for Constrained Decentralized Markov Decision Processes (Extended Abstract) (Page 1313)
Jie Xu (University of Miami)

A Bayesian Approach for Learning and Tracking Switching, Non-Stationary Opponents (Extended Abstract) (Page 1315)
Pablo Hernandez-Leal (Instituto Nacional de Astrofiisica)
Benjamin Rosman (Council for Scientific and Industrial Research & The University of the Witwatersrand)
Matthew E. Taylor (Washington State University)
L. Enrique Sucar (Instituto Nacional de Astrofiisica)
Enrique Munoz de Cote (Instituto Nacional de Astrofiisica)

**Posting Prices for a Perishable Item (Extended Abstract)** (Page 1317)
Bo Zheng (Tsinghua University)
Li Xiao (University of California, Irvine)
Guang Yang (Tsinghua University)
Tao Qin (Microsoft Research)

**Modeling Team Formation in Self-Assembling Software Development Teams (Extended Abstract)** (Page 1319)
Mehdi Farhangian (University of Otago)
Martin Purvis (University of Otago)
Maryam Purvis (University of Otago)
Bastin Tony Roy Savarimuthu (University of Otago)

**Analysis of Condition for the Cooperation Achievement on Arbitrary Networks (Extended Abstract)** (Page 1321)
Shohei Usui (University of Tokyo)
Fujio Toriumi (University of Tokyo)

**Achieving Sustainable Cooperation in Generalized Prisoner's Dilemma with Observation Errors (Extended Abstract)** (Page 1323)
Fuuki Shigenaka (Kyushu University)
Shun Yamamoto (Kyushu University)
Motohide Seki (Kyushu University)
Tadashi Sekiguchi (Kyoto University)
Atsushi Iwasaki (University of Electro-Communications)
Makoto Yokoo (Kyushu University)

**A Novel Incentive Mechanism for Truthful Performance Assessments of Cloud Services (Extended Abstract)** (Page 1325)
Lie Qu (Macquarie University)
Yan Wang (Macquarie University)
Mehmet Orgun (Macquarie University)

**Truthful Team Formation for Crowdsourcing in Social Networks (Extended Abstract)** (Page 1327)
Wanyuan Wang (Southeast University)
Zhanpeng He (Southeast University)
Peng Shi (Southeast University)
Weiiwei Wu (Southeast University)
Yichuan Jiang (Southeast University)

**Convergence and Quality of Iterative Voting Under Non-Scoring Rules (Extended Abstract)** (Page 1329)
Aaron Koolyk (Hebrew University)
Omer Lev (University of Toronto)
Jeffrey S. Rosenschein (Hebrew University)

**A Hyper-Heuristic Framework for Agent-Based Crowd Modeling and Simulation (Extended Abstract)** (Page 1331)
Jinghui Zhong (Nanyang Technological University)
Wentong Cai (Nanyang Technological University)

**Emergence of Cooperation in Complex Agent Networks Based on Expectation of Cooperation (Extended Abstract)** (Page 1333)
Ryosuke Shibusawa (Waseda University)
Tomoiaki Otsuka (Waseda University)
Toshiharu Sugawara (Waseda University)

**Market Share Analysis with Brand Effect (Extended Abstract)** (Page 1335)
Zhixuan Fang (Tsinghua University)
Longbo Huang (Tsinghua University)

**Argumentation-Based Reasoning Using Preferences over Sources of Information (Extended Abstract)**
Abstract) (Page 1337)
Victor S. Melo (Pontifical Catholic University of Rio Grande do Sul (PUCRS))
Alison R. Panisson (Pontifical Catholic University of Rio Grande do Sul (PUCRS))
Rafael H. Bordini (Pontifical Catholic University of Rio Grande do Sul (PUCRS))

Real-time Robot Path Planning Using Experience Learning From Common Obstacle Patterns (Extended Abstract) (Page 1339)
Olimpiya Saha (University of Nebraska at Omaha)
Prithviraj Dasgupta (University of Nebraska at Omaha)

Can't Do or Won't Do? Social Attributions in Human-Agent Cooperation (Extended Abstract) (Page 1341)
Philipp Kulms (Bielefeld University)
Nikita Mattar (Bielefeld University)
Stefan Kopp (Bielefeld University)

Computational Models of Emotion, Personality, and Social Relationships for Interactions in Games (Extended Abstract) (Page 1343)
Andry Chowanda (The University of Nottingham)
Peter Blanchfield (The University of Nottingham)
Martin Flintham (The University of Nottingham)
Michel Valstar (The University of Nottingham)

Multi-Objective Dynamic Dispatch Optimisation Using Multi-Agent Reinforcement Learning (Extended Abstract) (Page 1345)
Patrick Mannion (National University of Ireland Galway)
Karl Mason (National University of Ireland Galway)
Sam Devlin (University of York)
Jim Duggan (National University of Ireland Galway)
Enda Howley (National University of Ireland Galway)

Sequential Plan Recognition (Extended Abstract) (Page 1347)
Reuth Mirsky (Ben Gurion University)
Ya’akov (Kobi) Gal (Ben Gurion University)
Roni Stern (Ben Gurion University)
Meir Kalech (Ben Gurion University)

Strategyproof Matching with Minimum Quotas and Initial Endowments (Extended Abstract) (Page 1349)
Naoto Hamada (Kyushu University)
Ryoji Kurata (Kyushu University)
Suguru Ueda (Kyushu University)
Takamasa Suzuki (Kyushu University)
Makoto Yokoo (Kyushu University)

Incorporating Observation Error when Modeling Trust Between Multiple Robots Sharing a Common Workspace (Extended Abstract) (Page 1351)
Shreyasha Paudel (Stanford University)
Christopher M. Clark (Harvey Mudd College)

Towards Learning from Implicit Human Reward (Extended Abstract) (Page 1353)
Guangliang Li (Ocean University of China & University of Amsterdam)
Hamdi Dibeklioğlu (Delft University of Technology)
Shimon Whiteson (University of Oxford)
Hayley Hung (Delft University of Technology)

Influence-Based Opinion Diffusion (Extended Abstract) (Page 1355)
Laurence Cholvy (ONERA)

Applying DCOP_MST to a Team of Mobile Robots with Directional Sensing Abilities (Extended Abstract) (Page 1357)
Harel Yedidsion (Ben-Gurion University of the Negev)
Roie Zivan (Ben-Gurion University of the Negev)

Tracking Performance and Forming Study Groups for Prep Courses Using Probabilistic Graphical Models (Extended Abstract) (Page 1359)
Yoram Bachrach (Microsoft Research)
Yoad Lewenberg (The Hebrew University of Jerusalem)
Jeffrey S. Rosenschein (The Hebrew University of Jerusalem)
Yair Zick (Carnegie Mellon University)

**Argumentation for Resolving Privacy Disputes in Online Social Networks (Extended Abstract)** (Page 1361)
Nadin Kökciyan (Bogazici University)
Nefise Yaglıkıcı (Bogazici University)
Pınar Yolum (Bogazici University)

**Methods for Finding Leader-Follower Equilibria with Multiple Followers (Extended Abstract)** (Page 1363)
Nicola Basilico (University of Milan)
Stefano Coniglio (University of Southampton)
Nicola Gatti (Politecnico di Milano)

**Multi-Agent Mechanism for Efficient Cooperative Use of Energy (Extended Abstract)** (Page 1365)
Romain François Cailliere (Université Claude Bernard Lyon 1)
Samir Aknine (Université Claude Bernard Lyon 1)
Antoine Nongaillard (Université Lille 1)

**A Dialogue Protocol to Support Meaning Negotiation (Extended Abstract)** (Page 1367)
Gabrielle Santos (University of Liverpool)
Valentina Tamma (University of Liverpool)
Terry R. Payne (University of Liverpool)
Floriana Grasso (University of Liverpool)

**How Is Cooperation/Collusion Sustained in Repeated Multimarket Contact with Observation Errors? (Extended Abstract)** (Page 1369)
Atsushi Iwasaki (University of Electro-Communications)
Tadashi Sekiguchi (Kyoto University)
Shun Yamamoto (Kyushu University)
Makoto Yokoo (Kyushu University)

**Structural Control in Weighted Voting Games (Extended Abstract)** (Page 1371)
Anja Rey (Heinrich-Heine-Universität Düsseldorf)
Jörg Rothe (Heinrich-Heine-Universität Düsseldorf)

**Robots Reasoning with Cuts and Connections: Creating and Removing Entities (Extended Abstract)** (Page 1373)
Mihai Pomarlan (Bremen University)
Michael Beetz (Bremen University)

**Minimising the Rank Aggregation Error (Extended Abstract)** (Page 1375)
Mathijs M. de Weerdt (Delft University of Technology)
Enrico H. Gerding (University of Southampton)
Sebastian Stein (University of Southampton)

**Moving Target Defense for Web Applications Using Bayesian Stackelberg Games (Extended Abstract)** (Page 1377)
Satya Gautam Vadlamudi (Arizona State University)
Sailik Sengupta (Arizona State University)
Marthony Taguinod (Arizona State University)
Ziming Zhao (Arizona State University)
Adam Doupé (Arizona State University)
Gail-Joon Ahn (Arizona State University)
Subbarao Kambhampati (Arizona State University)

**Water Resources Systems Operations via Multiagent Negotiation (Extended Abstract)** (Page 1379)
Francesco Amigoni (Politecnico di Milano)
Andrea Castelletti (Politecnico di Milano)
Paolo Gazzotti (Politecnico di Milano)
Matteo Giuliani (Politecnico di Milano)
Emanuele Mason (Politecnico di Milano)

**Learning to be Fair in Multiplayer Ultimatum Games (Extended Abstract)** (Page 1381)
Fernando P. Santos (Universidade de Lisboa)
Francisco C. Santos (Universidade de Lisboa)
Francisco Melo (Universidade de Lisboa)
Ana Paiva (Universidade de Lisboa)
Jorge M. Pacheco (Universidade do Minho)

Verifying Conflicts among Multiple Norms in Multi-agent Systems (Extended Abstract) (Page 1383)
Eduardo Augusto Silvestre (Federal Fluminense University (UFF))
Viviane Torres da Silva (IBM Research, Brazil)

A Truthful Mechanism with Biparameter Learning for Online Crowdsourcing (Page 1385)
Satyanath Bhat (Indian Institute of Science)
Divya Padmanabhan (Indian Institute of Science)
Shweta Jain (Indian Institute of Science)
Yadati Narahari (Indian Institute of Science)

Probably Approximately Correct Greedy Maximization (Extended Abstract) (Page 1387)
Yash Satsangi (University of Amsterdam)
Shimon Whiteson (University of Oxford)
Frans A. Oliehoek (University of Liverpool; University of Amsterdam)

Analysis of Lane Level Dynamics for Emergency Vehicle Traversal (Extended Abstract) (Page 1389)
Akash Agarwal (IIT Hyderabad)
Praveen Paruchuri (IIT Hyderabad)

Strategic Disclosure of Opinions on a Social Network (Extended Abstract) (Page 1391)
Umberto Grandi (Toulouse University)
Emiliano Lorini (Toulouse University)
Laurent Perrussel (Toulouse University)

Baharak Rastegari (University of Glasgow)
Paul Goldberg (University of Oxford)
David Manlove (University of Glasgow)

Robust Influence Maximization (Extended Abstract) (Page 1395)
Meghna Lowalekar (Singapore Management University)
Pradeep Varakantham (Singapore Management University)
Akshat Kumar (Singapore Management University)

Multi-Agent Cooperative Area Coverage: Case Study Ploughing (Extended Abstract) (Page 1397)
Alireza Janani (Sheffield Hallam University)
Lyuba Alboul (Sheffield Hallam University)
Jacques Penders (Sheffield Hallam University)

Decentralised Norm Monitoring in Open Multi-Agent Systems (Extended Abstract) (Page 1399)
Natasha Alechina (University of Nottingham)
Joseph Y. Halpern (Cornell University)
Ian A. Kash (Microsoft Research)
Brian Logan (University of Nottingham)

Integrating Run-Time Incidents in a Large-Scale Simulated Urban Environment (Extended Abstract) (Page 1401)
Steven de Jong (TNO)
Alex Klein (Universiteit Utrecht)
Ruben Smelik (TNO)
Freek van Wermeskerken (TNO)

Learning Better Trading Dialogue Policies by Inferring Opponent Preferences (Extended Abstract) (Page 1403)
Ioannis Efstathiou (Heriot-Watt University)
Oliver Lemon (Heriot-Watt University)

Efficient Boolean Games Equilibria: A Scalable Approach (Extended Abstract) (Page 1405)
Zohar Komarovsky (Ben-Gurion University of the Negev)
Vadim Levit (Ben-Gurion University of the Negev)
Tal Grinshpoun (Ariel University)
Amnon Meisels (Ben-Gurion University of the Negev)

Coordinating Wind Turbines and Flexible Consumers with Cooperative and Competitive Agents (Extended Abstract) (Page 1407)
Kristof Coninx (KU Leuven)
Tom Holvoet (KU Leuven)

Approximate Plutocratic and Egalitarian Nash Equilibria (Extended Abstract) (Page 1409)
Artur Czumaj (University of Warwick)
Michail Fasoulakis (University of Warwick)
Marcin Jurdzinski (University of Warwick)

A Core Task Abstraction Approach to Hierarchical Reinforcement Learning (Extended Abstract) (Page 1411)
Zhuru Li (National University of Singapore)
Akshay Narayan (National University of Singapore)
Tze-Yun Leong (National University of Singapore & Singapore Management University)

Role Assignment for Game-Theoretic Cooperation (Extended Abstract) (Page 1413)
Catherine Moon (Duke University)
Vincent Conitzer (Duke University)

Conveying Social Relations in Virtual Agents Through an Emotion Sharing and Response Model (Extended Abstract) (Page 1415)
Nuno Salvador (Universidade de Lisboa)
João Dias (Universidade de Lisboa)
Samuel Mascarenhas (Universidade de Lisboa)
Ana Paiva (Universidade de Lisboa)

Exclusion Method for Finding Nash Equilibrium in Multi-Player Games (Extended Abstract) (Page 1417)
Kimmo Berg (Aalto University School of Science)
Tuomas Sandholm (Carnegie Mellon University)

Sum-Product-Max Networks for Tractable Decision Making (Extended Abstract) (Page 1419)
Mazen A. Melibari (University of Waterloo)
Pascal Poupart (University of Waterloo)
Prashant Doshi (University Of Georgia)

Knowledge-Enabled Robotic Agents for Shelf Replenishment in Cluttered Retail Environments (Extended Abstract) (Page 1421)
Jan Winkler (University of Bremen)
Ferenc Balint-Benczedi (University of Bremen)
Thiemo Wiedemeyer (University of Bremen)
Michael Beetz (University of Bremen)
Narunas Vaskevicius (Jacobs University Bremen)
Christian A. Mueller (Jacobs University Bremen)
Tobias Fromm (Jacobs University Bremen)
Andreas Birk (Jacobs University Bremen)

Communicating Intentions for Coordination with Unknown Teammates (Extended Abstract) (Page 1423)
Trevor Santarra (University of California, Santa Cruz)
Arnav Jhala (University of California, Santa Cruz)

OWLS: Observational Wireless Life-enhancing System (Extended Abstract) (Page 1425)
Hanzhong Zheng (Allegheny College)
Janyl Jumadinova (Allegheny College)

Supporting Group Plans in the BDI Architecture Using Coordination Middleware (Extended Abstract) (Page 1427)
Stephen Cranefield (University of Otago)

Reputation-based Provider Incentivisation for Provenance Provision (Extended Abstract) (Page 1429)
Lina Barakat (King's College London)
Samhar Mahmoud (King's College London)
Phillip Taylor (University of Warwick)
Nathan Griffiths (University of Warwick)
Simon Miles (King's College London)

The Convergence of Reciprocation (Extended Abstract) (Page 1431)
Gleb Polevoy (Delft University of Technology)
Mathijs de Weerdt (Delft University of Technology)
Catholijn Jonker (Delft University of Technology)

SOBE: Source Behavior Estimation for Subjective Opinions in Multiagent Systems (Extended Abstract) (Page 1433)
Murat Sensoy (Ozyegin University)
Lance Kaplan (US Army Research Lab)
Geeth de Mel (IBM T.J. Watson Research Center)
Taha D. Gunes (Ozyegin University)

Boolean Satisfiability Approach to Optimal Multi-agent Path Finding Under the Sum of Costs Objective (Extended Abstract) (Page 1435)
Pavel Surynek (Charles University Prague)
Ariel Felner (Ben Gurion University)
Roni Stern (Ben Gurion University)
Eli Boyarski (Bar-Ilan University)

What Kind of Stories Should a Virtual Human Swap? (Extended Abstract) (Page 1437)
Setareh Nasihati Gilani (University of Southern California)
Kraig Sheetz (United States Military Academy)
Gale Lucas (University of Southern California)
David Traum (University of Southern California)

Simultaneous Influencing and Mapping Social Networks (Extended Abstract) (Page 1439)
Leandro Soriano Marcolino (University of Southern California)
Aravind Lakshminarayanan (Indian Institute of Technology, Madras)
Amulya Yadav (University of Southern California)
Milind Tambe (University of Southern California)

Collaborative Human Task Assignment for Open Systems (Extended Abstract) (Page 1441)
Bin Chen (University of Nebraska-Lincoln)
Adam Eck (University of Nebraska-Lincoln)
Leen-Kiat Soh (University of Nebraska-Lincoln)

Investigating the Characteristics of One-Sided Matching Mechanisms (Extended Abstract) (Page 1443)
Hadi Hosseini (University of Waterloo)
Kate Larson (University of Waterloo)
Robin Cohen (University of Waterloo)

A Multi-Agent System for Resource Privacy: Deployment of Ambient Applications in Smart Environments (Extended Abstract) (Page 1445)
Ferdinand Piette (Sorbonne Universités & Institut Supérieur de l'Électronique et du Numérique)
Costin Caval (Sorbonne Universités)
Amal El Fallah Seghrouchni (Sorbonne Universités)
Patrick Taillibert (Sorbonne Universités)
Cédric Dinont (Institut Supérieur de l'Électronique et du Numérique)

Object-Focused Advice in Reinforcement Learning (Extended Abstract) (Page 1447)
Samantha Krening (Georgia Institute of Technology)
Brent Harrison (Georgia Institute of Technology)
Karen M. Feigh (Georgia Institute of Technology)
Charles Isbell (Georgia Institute of Technology)
Andrea Thomaz (University of Texas at Austin)

Reinforcement Learning Framework for Modeling Spatial Sequential Decisions under Uncertainty (Extended Abstract) (Page 1449)
Truc Viet Le (Singapore Management University)
Siyuan Liu (The Pennsylvania State University)
Hoong Chuin Lau (Singapore Management University)

Simulation Summarization (Extended Abstract) (Page 1451)
An Autonomous Agent for Learning Spatiotemporal Models of Human Daily Activities (Extended Abstract) (Page 1453)
Shan Gao (Nanyang Technological University)
Ah-Hwee Tan (Nanyang Technological University)

Policy Shaping in Domains with Multiple Optimal Policies (Extended Abstract) (Page 1455)
Himanshu Sahni (Georgia Institute of Technology)
Brent Harrison (Georgia Institute of Technology)
Kaushik Subramanian (Georgia Institute of Technology)
Thomas Cederborg (Georgia Institute of Technology)
Charles Isbell (Georgia Institute of Technology)
Andrea Thomaz (University of Texas at Austin)

Using Facial Expression and Body Language to Express Attitude for Non-Humanoid Robot (Extended Abstract) (Page 1457)
Mei Si (Rensselaer Polytechnic Institute)
Joseph Dean McDaniel (Rensselaer Polytechnic Institute)

Optimal Sample Size for Adword Auctions (Extended Abstract) (Page 1459)
Jiang Rong (Chinese Academy of Sciences & University of Chinese Academy of Sciences)
Tao Qin (Microsoft Research)
Bo An (Nanyang Technological University)
Tie-Yan Liu (Microsoft Research)

Multi-Option Descending Clock Auction (Extended Abstract) (Page 1461)
Tri-Dung Nguyen (University of Southampton)
Tuomas Sandholm (Carnegie Mellon University)

Strategy-Proof Mechanism Design for Facility Location Games: Revisited (Extended Abstract) (Page 1463)
Lili Mei (Zhejiang University)
Minming Li (City University of Hong Kong)
Deshi Ye (Zhejiang University)
Guochuan Zhang (Zhejiang University)

Stochastic Shortest Path with Energy Constraints in Pomdps (Extended Abstract) (Page 1465)
Tomáš Brázdíl (Masaryk University)
Krishnendu Chatterjee (IST Austria)
Martin Chmelík (IST Austria)
Anchit Gupta (IIT Bombay)
Petr Novotný (IST Austria)

Using Environmental Patterns to Evaluate Agent Teams Performance (Page 1467)
Mariana R. Franco (Universidade de São Paulo)
Gustavo A. L. de Campos (Universidade Estadual do Ceará)
Jaime S. Sichman (Universidade de São Paulo)

Estimating Second-Order Arguments in Dialogical Settings (Extended Abstract) (Page 1469)
Seyed Ali Hosseini (King's College London)
Sanjay Modgil (King's College London)
Odinaldo Rodrigues (King's College London)

Demonstrations
A Virtual Emotional Freedom Therapy Practitioner (Demonstration) (Page 1471)
Hedieh Ranjbartabar (Macquarie University)
Deborah Richards (Macquarie University)

Multilayered Multiagent System for Traffic Simulation (Demonstration) (Page 1474)
Rafik Hadfi (Nagoya Institute of Technology)
Takayuki Ito (Nagoya Institute of Technology)

A Treasure Hunt with an Empathic Virtual Tutor (Demonstration) (Page 1477)
A Kinect-based Interactive Game to Improve the Cognitive Inhibition of the Elderly (Demonstration) (Page 1479)
Siyuan Liu (Nanyang Technological University)
Zhiqi Shen (Nanyang Technological University)
Han Yu (Nanyang Technological University)
Han Lin (Nanyang Technological University)
Zhengjin Guo (Nanyang Technological University)
Zhengxiang Pan (Nanyang Technological University)
Chunyan Miao (Nanyang Technological University)
Cryil Leung (Nanyang Technological University & The University of British Columbia)

A Decentralised Multi-Agent System for Emergency Resource Allocation in Metropolitan Regions (Demonstration) (Page 1482)
Jihang Zhang (University of Wollongong)
Minjie Zhang (University of Wollongong)
Fenghui Ren (University of Wollongong)
Jiakun Liu (University of Wollongong)

Using Personality Models as Prior Knowledge to Accelerate Learning about Stress-Coping Preferences: (Demonstration) (Page 1485)
Sebastian Ahrendt (Technische Universität Berlin)
Marco Lützenberger (Technische Universität Berlin)
Stephen M. Prochnow (Technische Universität Berlin)

A Vision Enriched Intelligent Agent with Image Description Generation (Demonstration) (Page 1488)
Li Zhang (Northumbria University)
Ben Fielding (Northumbria University)
Philip Kinghorn (Northumbria University)
Kamlesh Mistry (Northumbria University)

Simulating Drone-Be-Gone: Agile Low-Cost Cyber-Physical Uav Testbed (Page 1491)
Mouhyemen Khan (Qatar University)
Sidra Alam (Qatar University)
Amr Mohamed (Qatar University)
Khaled A. Harras (Carnegie Mellon University)

TARTARUS: A Multi-Agent Platform for Bridging the Gap Between Cyber and Physical Systems (Demonstration) (Page 1493)
Tushar Semwal (Indian Institute of Technology Guwahati)
Nikhil S (Indian Institute of Technology Guwahati)
Shashi Shekhar Jha (Indian Institute of Technology Guwahati)
Shivashankar B. Nair (Indian Institute of Technology Guwahati)

PriGuardTool: A Tool for Monitoring Privacy Violations in Online Social Networks (Demonstration) (Page 1496)
Nadin Kökciyan (Bogazici University)
Pinar Yolum (Bogazici University)

SPECTRE: A Game Theoretic Framework for Preventing Collusion in Security Games (Demonstration) (Page 1498)
Shahrzad Gholami (University of Southern California)
Bryan Wilder (University of Southern California)
Matthew Brown (University of Southern California)
Arunesh Sinha (University of Southern California)
Nicole Sintov (University of Southern California)
Milind Tambe (University of Southern California)

NWin: A Tool for Counting Winning Strategies (Demonstration) (Page 1501)
Doctoral Mentoring Abstracts

Human-Multi-Robot Team Collaboration Using Advising Agents (Doctoral Consortium) (Page 1516)
Ariel Rosenfeld (Bar-Ilan University)

An Auction-based Approach for Decentralized Multi-Project Scheduling (Doctoral Consortium) (Page 1518)
Wen Song (Nanyang Technological University)

A Systematic Approach for Detecting Defects in Agent Designs (Doctoral Consortium) (Page 1520)
Yoosef Abushark (RMIT University)

A Novel Approach to Evaluate Robustness of Incentive Mechanism against Bounded Rationality (Doctoral Consortium) (Page 1522)
Zehong Hu (Nanyang Technological University)

Plan Recognition in Exploratory Domains (Doctoral Consortium) (Page 1524)
Reuth Mirsky (Ben Gurion University)

Adapting Plans through Communication with Unknown Teammates (Doctoral Consortium) (Page 1526)
Trevor Santarra (University of California, Santa Cruz)

Curriculum Learning in Reinforcement Learning (Doctoral Consortium) (Page 1528)
Sanmit Narvekar (University of Texas at Austin)

MAS-based, Scalable Allocation of Resources in Large-scale, Dynamic Environments (Doctoral Consortium) (Page 1530)
Diana Gudu (Karlsruhe Institute of Technology)

Learning to Act Optimally in Partially Observable Multiagent Settings (Doctoral Consortium) (Page 1532)
Roi Ceren (University of Georgia)

Strategic Voting and Social Networks (Doctoral Consortium) (Page 1534)
Alan Tsang (University of Waterloo)

Planning for Symbiotic Action (Doctoral Consortium) (Page 1536)
Tathagata Chakraborti (Arizona State University)