

AAMAS 2011

THE TENTH INTERNATIONAL CONFERENCE ON
AUTONOMOUS AGENTS AND MULTIAGENT SYSTEMS



MAY 2-6, 2011 TAIPEI, TAIWAN



Conference Program

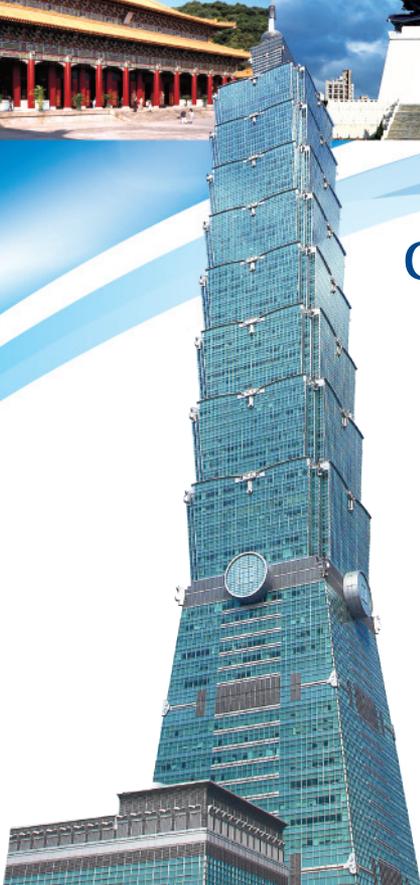


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PREFACE

The Autonomous Agents and MultiAgent Systems (AAMAS) conference series brings together researchers from around the world to share the latest advances in the field. It provides a marquee, high-profile forum for research in the theory and practice of autonomous agents and multiagent systems. AAMAS 2002, the first of the series, was held in Bologna, followed by Melbourne (2003), New York (2004), Utrecht (2005), Hakodate (2006), Honolulu (2007), Estoril (2008), Budapest (2009) and Toronto (2010). You are now about to enter the proceedings of AAMAS 2011, held in Taipei, Taiwan, as AAMAS celebrates its 10th anniversary as the successful merger of three related events that had run for some years previously.

In addition to the general track for the AAMAS 2011 conference, submissions were invited to three special tracks: a Robotics track, a Virtual Agents track and an Innovative Applications track. The aims of these special tracks were to give researchers from these areas a strong focus, to provide a forum for discussion and debate within the encompassing structure of AAMAS, and to ensure that the impact of both theoretical contributions and innovative applications were recognized. Each track was Chair a leader in the field: Maria Gini for the robotics track, James Lester for the virtual agents track, and Peter McBurney for the innovative applications track. The special track chairs provided critical input to selection of Program Committee (PC) and Senior Program Committee (SPC) members, and to the reviewer allocation and the review process itself. The final decisions concerning acceptance of papers were taken by the AAMAS 2011 Program Co-chairs in discussion with, and in full agreement with the special track chairs.



Only full paper submissions were solicited for AAMAS 2011. The general, robotics, virtual agents, and innovative applications tracks received 452, 31, 51, and 41 submissions respectively, for a total of 575 submissions.

After a thorough and exciting review process, 126 papers were selected for publication as Full Papers each of which was allocated 8 pages in the proceedings and allocated 20 minutes in the Program for oral presentation. Another 123 papers were selected as Extended Abstracts and allocated 2 pages each in the proceedings. Both Full Papers and Extended Abstracts are presented as posters during the conference.

Of the submissions, more than half (338) have a student as first author, which indicates an exciting future for the field. Representation under all submissions of topics (measured by first keyword) was broad, with top counts in areas such as teamwork, coalition formation, and coordination (31), distributed problem solving (30), game theory (30), planning (26), multiagent learning (24), and trust, reliability and reputation (17).

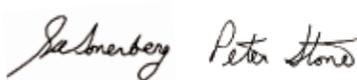
We thank the PC and SPC members of AAMAS 2011 for their thoughtful reviews and extensive discussions. We thank Maria Gini, James Lester and Peter McBurney for making the Robotics, the Virtual Agents and the Innovative Applications tracks a success. We thank Michael Rovatsos for putting together the proceedings. Finally, we thank David Shield for his patience and support regarding Confmaster during every stage between the submission process and the actual AAMAS 2011 event. The Program represents the intellectual motivation for researchers to come together at the Conference, but the success of the event is dependent on the many other elements that make up the week especially the tutorials, workshops, and doctoral consortium. We thank all members of the Conference Organising Committee for their dedication, enthusiasm, and attention to detail, and wish to particularly thank Von-Wun Soo as Chair of the Local Organising Committee for his contributions.



Kagan Tumer

Pinar Yolum

AAMAS 2011 Program Co-Chairs



Liz Sonenberg

Peter Stone

AAMAS 2011 General Co-Chairs

COMMITTEES

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PROGRAM AT-A-GLANCE

MONDAY, MAY 2

09:00-18:00 **Tutorials and Workshops**

TUESDAY, MAY 2

09:00-18:00 **Tutorials, Workshops and Doctoral Consortium**

18:00-19:30 **Welcome Reception** Banquet Hall

WEDNESDAY, MAY 4

08:45-09:00 **Opening** Banquet Hall

09:00-10:00 **Invited Talk** Banquet Hall
 Evolutionary Individual-Based Models and Their Applications
 in Problem Solving and Games
David B. Fogel

10:00-10:30 **Coffee Break** 201

10:30-12:10 A1 – Robotics 101A
 B1 – Distributed Problem Solving I 101B
 C1 – Game Theory I 101C
 D1 – Multiagent Learning 101D

12:10-13:30 **Lunch**

13:30-15:10 Best Papers Session I 101C
 Best Papers Session II 101D

15:10-15:30 **Coffee Break** 201

15:30-16:30	Session A2 – Logic-Based Approaches I	101A
	Session B2 – Agent-Based System Development I	101B
	Session C2 – Social Choice Theory	101C
	Session D2 – Preferences and Strategies	101D
16:30-17:30	Session A3 – Distributed Problem Solving II	101A
	Session B3 – Agent-Based System Development II	101B
	Session C3 – Bounded Rationality	101C
	Session D3 – Virtual Agents I	101D

18:30-20:30	Conference Banquet	Grand Hotel
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THURSDAY, MAY 5

09:00-10:00	Invited Talk	Banquet Hall
	Beyond Nash Equilibrium: Solution Concepts for the 21st Century	
	<i>Joe Halpern</i>	

10:00-10:30	Coffee Break	201
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10:30-12:10	Session A4 – Agent Communication	101A
	Session B4 – Game Theory and Learning	101B
	Session C4 – Teamwork	101C

	Special Session	Banquet Hall
	Victor Lesser Distinguished Dissertation Award	

12:10-13:30	Lunch	
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13:30-15:10	Session A5 – Learning Agents	101A
	Session B5 – Auction and Incentive Design	101B
	Session C5 – Simulation and Emergence	101C
	Session D5 – Logic-Based Approaches II	101D

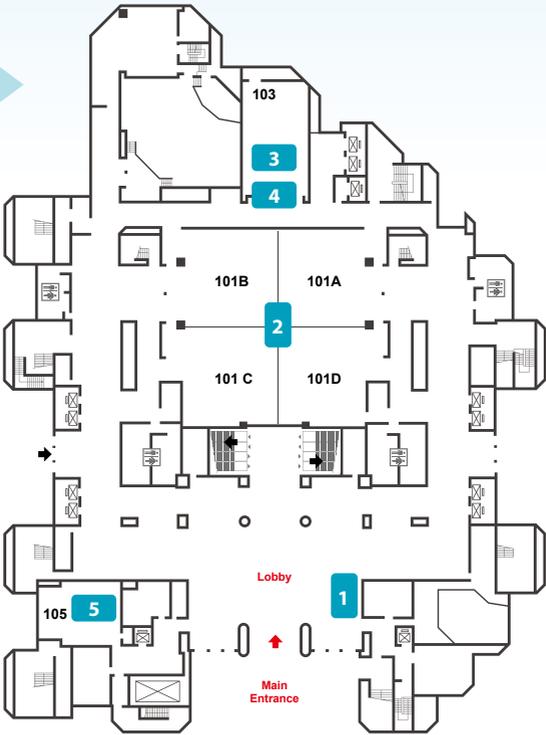
15:10-15:30	Coffee Break	201
15:30-16:30	Invited Talk Continuous Visual Object Category Learning <i>Kristen Grauman</i>	Banquet Hall
16:30-20:00	Poster/Demo Session	201

FRIDAY, MAY 6

09:00-10:00	Invited Talk Developmental constraints for open-ended robot learning <i>Pierre-Yves Oudeyer</i>	Banquet Hall
10:00-10:30	Coffee Break	201
10:30-12:10	Session A6 – Robotics and Learning Session B6 – Energy Applications Session C6 – Voting Protocols Session D6 – Trust and Organisational Structure	101A 101B 101C 101D
12:10-13:00	Complimentary Lunch	VIP Room
13:00-14:40	Session A7 – Argumentation and Negotiation Session B7 – Planning Session C7 – Game Theory II Session D7 – Virtual Agents II	101A 101B 101C 101D
14:40-16:00	Community Meeting & Closing	Banquet Hall

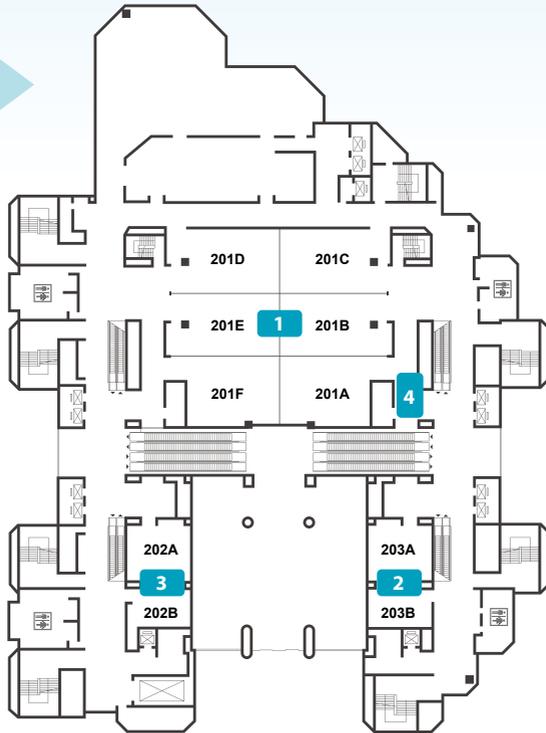
FLOOR MAPS

1st FLOOR



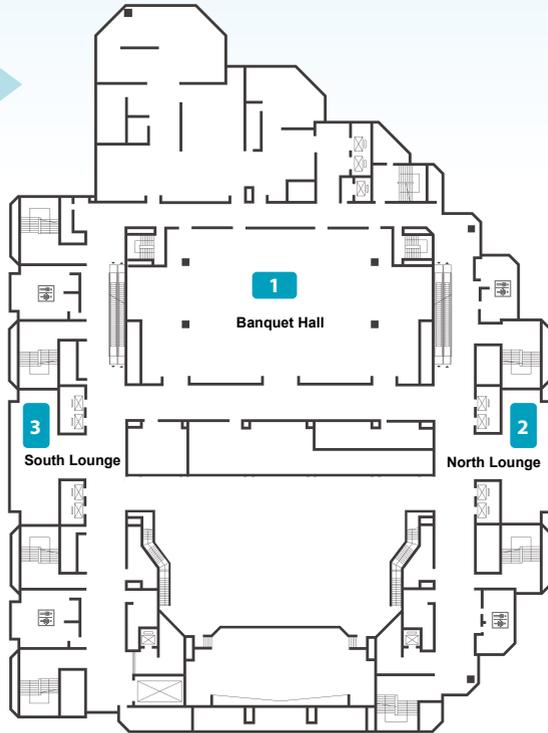
1	Main Entrance	Mon-Fri	Registration & Information
2	101A	Mon	Tutorials
	101A/B/C/D	Wed-Fri	Oral Presentations
3	103	Mon	Workshops
		Tue	Doctoral Consortium
4	West Corridor	Tue	Doctoral Consortium Posters
5	105	Mon-Fri	Secretariat Room

**2nd
 FLOOR**



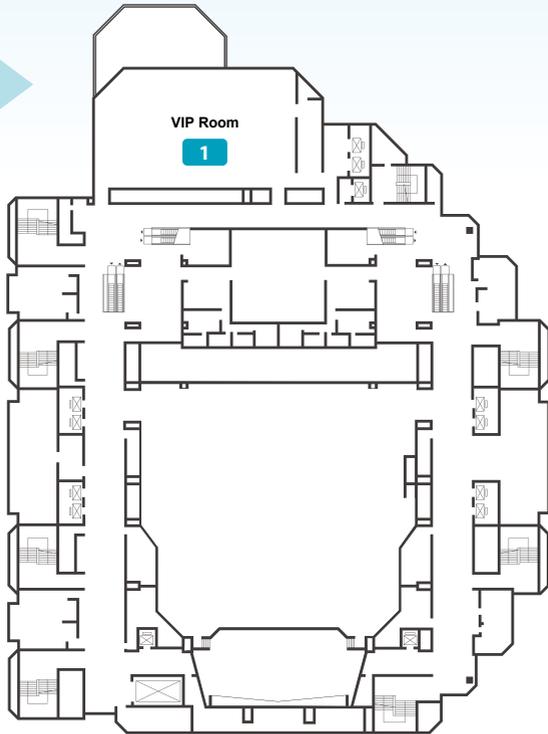
1	201A/B/C/D/E/F	Mon-Tue	Workshops, Tutorials
	201	Wed-Fri	Poster/Demo Sessions, Coffee Breaks
2	202A/B	Mon-Tue	Workshops, Tutorials
	202A	Tue	IFAAMAS Board Meeting (Closed Meeting)
3	203A/B	Mon-Tue	Tutorials
4	North Corridor	Thu	Automated Negotiating Agents Competition (ANAC 2011)

3rd FLOOR



1 Banquet Hall	Tue	Welcome Reception
	Wed	Opening, Invited Talk
	Thu	Award Talks, Invited Talk
	Fri	Invited Talk, Community Meeting & Closing
2 North Lounge	Mon-Tue	Workshops
	Thu	Organizing Committee Meeting (Closed Meeting)
3 South Lounge	Mon-Tue	Workshops

**4th
FLOOR**



1 VIP Room Fri Complimentary Lunch for Registrants

DOCTORAL CONSORTIUM

TUESDAY, MAY 3

Full Day 09:00-10:45 / 11:05-12:25 / 13:35-15:15 / 15:35-17:50

Room: 103

Welcome Address 09:00-09:05

Oral Presentations - Session 1 09:05-10:45

Agent Dialogues and Argumentation

Xiuyi Fanhas

Modeling Crowd Behavior Based on Social Comparison Theory

Natalie Fridman

Graphical Multiagent Models

Quang Duong

A Cost-Oriented Reorganization Reasoning for Multiagent Systems Organization Transitions

Juan M. Alberola

Reasoning About Norms Within Uncertain Environments

Natalia Criado Pacheco

Invited Lectures 11:05-12:25

Oral Presentations - Session 2 13:35-15:15

Security Games with Mobile Patrollers

Ondřej Vaněk

Securing Networks Using Game Theory: Algorithms and Applications

Manish Jain

Real-World Security Games: Toward Addressing Human Decision-Making Uncertainty

James Pita

Cooperation between Self-Interested Agents in Normal Form Games

Steven Damer

Decentralized Semantic Service Discovery based on Homophily for Self-Adaptive Service-Oriented MAS

Elena del Val Noguera

Oral Presentation – Session 3

15:35-16:55

Massively Multi-Agent Pathfinding made Tractable, Efficient, and with Completeness Guarantees

Ko-Hsin Cindy Wang

A Trust Model for Supply Chain Management

Yasaman Haghpanah

Human Factors in Computer Decision-Making

Dimitrios Antoshas

The Social Structure of Trust

Elisabetta Erriquez

Panel Discussion

16:55-17:50

Coffee Breaks: 10:45-11:05 / 15:15-15:35

Lunch & Posters: 12:25-13:35

TUTORIALS

MONDAY, MAY 2

Full Day 09:00-10:30 / 11:00-13:00 / 14:00-15:30 / 16:00-18:00

T4: CoopMAS tut **Cooperative Games in MAS** Room: 203B
Chalkiadakis, Elkind, Wooldridge

T5: Dec. Making **Decision Making in MAS** Room: 203A
Doshi, Rabinovich, Amato, Spaan

Half Day / Afternoon 14:00-15:30 / 16:00-18:00

T2: El. Negotiation **Agent-Mediated Electronic Negotiation** Room: 101A
La Poutre, Robu, Fatima, Ito

TUESDAY, MAY 3

Full Day 09:00-10:30 / 11:00-13:00 / 14:00-15:30 / 16:00-18:00

T6: Sec. Games **Security Games** Room: 203A
Kiekintveld, Gatti, Jain

T9: Social Laws **Social Laws for MAS** Room: 203B
Ågotnes, Van der Hoek, Wooldridge

Half Day / Morning 09:00-10:30 / 11:00-13:00

T7: MARL I **Multi-Agent Reinforcement Learning I:
Algorithms and Analysis Methods** Room: 202A
De Jong, Kaisers, Melo, Nowe, Tuyls

Half Day / Afternoon 14:00-15:30 / 16:00-18:00

T8: MARL II **Multi-Agent Reinforcement Learning II:
Learning with and from Other Agents** Room: 202A
De Jong, Kaisers, Melo, Nowe, Tuyls

Coffee Breaks: 10:30-11:00 / 15:30-16:00

Lunch: 13:00-14:00

WORKSHOPS

MONDAY, MAY 2

Full Day 09:00-10:30 / 11:00-13:00 / 14:00-15:30 / 16:00-18:00

W3: ADMI	Agent and Data Mining Interaction Workshop <i>Andreas L. Symeonidis</i>	Room: South Lounge
W4: AEGS	Agents for Educational Games and Simulations <i>Martin Beer, Von-Wun Soo, Cyril Brom, Frank Dignum</i>	Room: 201A
W5: ALA	Adaptive and Learning Agents <i>Peter Vrancx, Matt Knudson, Marek Grzes</i>	Room: 201B
W7: AMPLE	Agent-based Modeling for Policy Engineering <i>Francien Dechesne</i>	Room: 202A
W8: AOSE	Agent-Oriented Software Engineering <i>Danny Weyns</i>	Room: 201D
W10: ARMS	Autonomous Robots and Multirobot Systems <i>Gal Kaminka, Adriaan ter Mors</i>	Room: 201E
W11: ATES	Agent Technologies for Energy Systems <i>Alex Rogers</i>	Room: 103
W17: ITMAS	Infrastructures and Tools for Multiagent Systems <i>Jose Miguel Such</i>	Room: 202B
W18: MABS	Multi-Agent-based Simulation <i>Jordi Sabater, Daniel Villatoro, Jaime Sichman</i>	Room: North Lounge

W22: Trust **Trust in Agent Societies** Room: 201F
Rino Falcone

Half Day / Morning 09:00-10:30 / 11:00-13:00

W6: AMEC **Agent-Mediated Electronic Commerce** Room: 201C
Onn Shehory

Half Day / Afternoon 14:00-15:30 / 16:00-18:00

W16: DOCM3AS **Data Oriented Constructive Mining and Multi-Agent Simulation, Massively Multi-Agent Systems: Models, Methods and Tools** Room: 201C
Hiromitsu Hattori, Nadeem Jamali

TUESDAY, MAY 3

Full Day 09:00-10:30 / 11:00-13:00 / 14:00-15:30 / 16:00-18:00

W1: ACAN **Agent - Based Complex Automated Negotiations** Room: 201A
Kiekintveld, Gatti, Jain

W9: ArgMAS **Argumentation in Multi-Agent Systems** Room: 201B
Peter McBurney

W12: CARE **Collaborative Agents - Research & Development** Room: 202B
Christian Guttman

W13: COIN **Coordination, Organizations, Institutions and Norms in Agent Systems** Room: 201D
Stephen Cranefield

TECHNICAL SESSIONS

WEDNESDAY, MAY 4

Opening	08:45-09:00
	Room: Banquet Hall

Invited Talk	09:00-10:00
Chair: Kagan Tumer	Room: Banquet Hall
Evolutionary Individual-Based Models and Their Applications in Problem Solving and Games	
<i>David B. Fogel</i>	

Coffee Break	10:00-10:30
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Session 1	10:30-12:10
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A1: Robotics

Chair: Maria Gini	Room: 101A
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Who Goes There? Selecting a Robot to Reach a Goal

Meytal Traub, Gal Kaminka, Noa Agmon

Exploration Strategies Based on Multi-Criteria Decision Making for Search and Rescue Autonomous Robots

Nicola Basilico, Francesco Amigoni

Simulation-based Temporal Projection of Everyday Robot Object Manipulation

Lars Kunze, Mihai Dolha, Emitzá Guzmán, Michael Beetz

Online Anomaly Detection in Unmanned Vehicles

Eliahu Khalastchi, Meir Kalech, Raz Lin, Gal Kaminka

Tree Adaptive A* for Goal-Directed Navigation in Initially Unknown Terrain

Carlos Hernandez, Xiaoxun Sun, Sven Koenig, Pedro Meseguer

B1: Distributed Problem Solving I

Chair: Ed Durfee

Room: 101B

Quality Guarantees for Region Optimal DCOP Algorithms

Meritxell Vinyals, Eric Shieh, Jesus Cerquides, Juan Antonio Rodriguez-Aguilar, Zhengyu Yin, Milind Tambe, Emma Bowring

Distributed Algorithms for Solving the Multiagent Temporal Decoupling Problem

James Boerkoel Jr., Ed Durfee

Decomposing Constraint Systems

Wiebe van der Hoek, Cees Witteveen, Michael Wooldridge

Decentralized Monitoring of Anytime Decision Making

Alan Carlin, Shlomo Zilberstein

Consensus Acceleration in Multiagent Systems with the Chebyshev Semi-Iterative Method

Renato L.G. Cavalcante, Alex Rogers, Nick Jennings

C1: Game Theory I

Chair: Jeff Rosenschein

Room: 101C

Information Elicitation for Decision Making

Kash Ian, Yiling Chen

Stable Partitions in Additively Separable Hedonic Games

Haris Aziz, Felix Brandt, Hans Georg Seedig

Complexity of coalition structure generation

Haris Aziz, Bart Keijzer

Equilibrium Approximation in Extensive-Form Simulation-Based Games

Nicola Gatti, Marcello Restelli

Maximum Causal Entropy Correlated Equilibria for Markov Games

Brian Ziebart, Drew Bagnell, Anind Dey

D1: Multiagent Learning

Chair: Karl Tuyls

Room: 101D

Learning Action Models for Multi-Agent Planning

Hankz Hankui Zhuo, Hector Muñoz-Avila, Qiang Yang

Theoretical Considerations of Potential-Based Reward Shaping for Multi-Agent Systems

Sam Devlin, Daniel Kudenko

Evolving Subjective Utilities: Prisoner's Dilemma Game Examples

Koichi Moriyama, Satoshi Kurihara, Masayuki Numao

Cooperation through Reciprocity in Multiagent Systems: An Evolutionary Analysis

Christian Huetter, Klemens Böhm

Distributed Cooperation in Wireless Sensor Networks

Mihail Mihaylov, Yann-Aël Le Borgne, Karl Tuyls, Ann Nowe

Lunch

12:10-13:30

Special Session: Best Paper Nominees

13:30-15:10

BP1: Best Paper Nominees I

Chair: Peter McBurney

Room: 101C

Agent-Based Control for Decentralised Demand Side Management in the Smart Grid

Sarvapali Ramchurn, Perukrishnen Vytelingum, Alex Rogers, Nick Jennings

Deploying Power Grid-Integrated Electric Vehicles as a Multi-Agent System

Sachin Kamboj, Willett Kempton, Keith Decker

Multi-Agent Monte Carlo Go

Leandro Soriano Marcolino, Hitoshi Matsubara

Towards a Unifying Characterization for Quantifying Weak Coupling in Dec-POMDPs

Stefan Witwicki, Ed Durfee

GUARDS - Game Theoretic Security Allocation on a National Scale

James Pita, Milind Tambe, Christopher Kiekintveld, Shane Cullen, Erin Steigerwald

BP2: Best Paper Nominees II

Chair: Liz Sonenberg

Room: 101D

On the Outcomes of Multiparty Persuasion

Elise Bonzon, Nicolas Maudet

Arbitrators in Overlapping Coalition Formation Games

Yair Zick, Edith Elkind

Learning the Demand Curve in Posted-Price Digital Goods Auctions

Meenal Chhabra, Sanmay Das

Ties Matter: Complexity of Voting Manipulation Revisited

Svetlana Obraztsova, Edith Elkind, Noam Hazon

Designing Incentives for Boolean Games

Ulle Endriss, Sarit Kraus, Jerome Lang, Michael Wooldridge

Coffee Break

15:10-15:30

Session 2

15:30-16:30

A2: Logic-Based Approaches I

Chair: Wiebe v.d. Hoek

Room: 101A

A Framework for Coalitional Normative Systems

Jun Wu, Chongjun Wang, Junyuan Xie

Practical Argumentation Semantics for Socially Efficient Defeasible Consequence

Hiroyuki Kido, Katsumi Nitta

Taming the Complexity of Linear Time BDI Logics

Nils Bulling, Koen Hindriks

B2: Agent-Based System Development I

Chair: John Thangarajah

Room: 101B

Scenarios for System Requirements Traceability and Testing

John Thangarajah, Gaya Jayatilleke, Lin Padgham

Kokomo: An Empirically Evaluated Methodology for Affective Applications

Derek J. Sollenberger, Munindar P. Singh

Programming Mental State Abduction

Michal Sindlar, Mehdi Dastani, John-Jules Meyer

C2: Social Choice Theory

Chair: Vincent Conitzer

Room: 101C

Possible And Necessary Winners In Voting Trees: Majority Graphs Vs. Profiles

Maria Silvia Pini, Francesca Rossi, Kristen Brent Venable, Toby Walsh

Tight Bounds for Strategyproof Classification

Reshef Meir, Shaull Almagor, Assaf Michaely, Jeffrey Rosenschein

A Double Oracle Algorithm for Zero-Sum Security Games on Graphs

Manish Jain, Dmytro Korzhuk, Ondrej Vaneek, Vincent Conitzer, Michal Pechoucek, Milind Tambe

D2: Preferences and Strategies

Chair: Stephane Airiau

Room: 101D

Modeling Social Preferences in Multi-player games

Brandon Wilson, Inon Zuckerman, Dana Nau

A Study of Computational and Human Strategies in Revelation Games

Noam Peled, Kobi Gal, Sarit Kraus

Efficient Heuristic Approach to Dominance Testing in CP-nets

Minyi Li, Bao Vo, Ryszard Kowalczyk

Session 3

16:30-17:30

A3: Distributed Problem Solving II

Chair: Matt Taylor

Room: 101A

Resource-Aware Junction Trees for Efficient Multi-Agent Coordination

Nicolas Stefanovitch, Alessandro Farinelli, Alex Rogers, Nick Jennings

Bounded Decentralised Coordination over Multiple Objectives

Francesco Maria Delle Fave, Ruben Stranders, Alex Rogers, Nick Jennings

Communication-Constrained DCOPs: Message Approximation in GDL with Function Filtering

Marc Pujol-Gonzalez, Jesus Cerquides, Juan Antonio Rodriguez-Aguilar, Pedro Meseguer

B3: Agent-Based System Development II

Chair: Mehdi Dastani

Room: 101B

AgentScope: Multi-Agent Systems Development in Focus

Elth Ogston, Frances Brazier

Agent Programming with Priorities and Deadlines

Konstantin Vikhorev, Natasha Alechina, Brian Logan

Rich Goal Types in Agent Programming

Mehdi Dastani, M. Birna van Riemsdijk, Michael Winikoff

C3: Bounded Rationality

Chair: Edith Elkind

Room: 101C

Expert-Mediated Search

Meenal Chhabra, Sanmay Das, David Sarne

Using Aspiration Adaptation Theory to Improve Learning

Avi Rosenfeld, Sarit Kraus

Less Is More: Restructuring Decisions to Improve Agent Search

David Sarne, Avshalom Elmalech, Barbara J. Grosz, Moti Geva

D3: Virtual Agents I

Chair: Jonathan Gratch

Room: 101D

Culture-related Differences in Aspects of Behavior for Virtual Characters Across Germany and Japan

Birgit Endrass, Matthias Rehm, Afia Akhter Lipi, Yukiko Nakano, Elisabeth Andre

Controlling Narrative Time in Interactive Storytelling

Julie Porteous, Jonathan Teutenberg, Fred Charles, Marc Cavazza

ESCAPES: Evacuation Simulation with Children, Authorities, Parents, Emotions, and Social Comparison

Jason Tsai, Natalie Fridman, Matthew Brown, Andrew Ogden, Inbal Rika, Xuezhi Wang, Shira Epstein, Avishay Zilka, Matthew Taylor, Milind Tambe, Emma Bowring, Stacy Marsella, Gal Kaminka, Ankur Sheel

THURSDAY, MAY 5

Invited Talk: ACM Research Award

09:00-10:00

Chair: Michael Wooldridge

Room: Banquet Hall

Beyond Nash Equilibrium: Solution Concepts for the 21st Century

Joe Halpern

Coffee Break

10:00-10:30

Session 4

10:30-12:10

A4: Agent Communication

Chair: Michael Rovatsos

Room: 101A

Commitments with Regulations: Reasoning about Safety and Control

Matteo Baldoni, Cristina Baroglio, Amit Chopra, Elisa Marengo, Viviana Patti, Munindar Singh

Specifying and Applying Commitment-Based Business Patterns

Amit Chopra, Munindar Singh

On the Verification of Social Commitments and Time

Mohamed El- Menshawy Mohamed, Jamal Bentahar, Hongyang Qu, Rachida Dssouli

Information-Driven Interaction-Oriented Programming

Munindar Singh

On Topic Selection Strategies in Multi-Agent Naming Game

Lorkiewicz Wojciech, Ryszard Kowalczyk, Radoslaw Katarzyniak, Bao Vo

B4: Game Theory and Learning

Chair: Alex Rogers

Room: 101B

Reaching Correlated Equilibria Through Multi-agent Learning

Ludek Cigler, Boi Faltings

Sequential Targeted Optimality as a New Criterion for Teaching and Following in Repeated Games

Max Knobbout, Gerard Vreeswijk

On the Quality and Complexity of Pareto Equilibria in the Job Scheduling Game

Elena Kleiman, Leah Epstein

Game Theory-Based Opponent Modeling in Large Imperfect-Information Games

Sam Ganzfried, Tuomas Sandholm

False-name Bidding in First-price Combinatorial Auctions with Incomplete Information

Atsushi Iwasaki, Atsushi Katsuragi, Makoto Yokoo

C4: Teamwork

Chair: Juan A Rodriguez

Room: 101C

Metastrategies in the colored trails game

Steven de Jong, Daniel Hennes, Kobi Gal, Karl Tuyls

Computing stable outcomes in hedonic games with voting-based deviations

Martin Gairing, Rahul Savani

Empirical Evaluation of Ad Hoc Teamwork in the Pursuit Domain

Samuel Barrett, Peter Stone, Sarit Kraus

Decision Theoretic Behavior Composition

Nitin Yadav, Sebastian Sardina

Solving Election Manipulation Using Integer Partitioning Problems

Lin Andrew

Special Session: Victor Lesser Distinguished Dissertation Award

10:30-11:30

Chair: Sandip Sen

Room: Banquet Hall

Lunch 12:10-13:30

Session 5 13:30-15:10

A5: Learning Agents

Chair: Paul Scerri Room: 101A

Using Iterated Reasoning to Predict Opponent Strategies

Michael Wunder, Michael Kaisers, Michael Littman, John Robert Yaros

Cognitive Policy Learner: Biasing Winning or Losing Strategies

Dominik Dahlem, Jim Dowling, William Harrison

Agent-Mediated Multi-Step Optimization for Resource Allocation in Distributed Sensor Networks

Bo An, Victor Lesser, David Westbrook, Michael Zink

Integrating Reinforcement Learning with Human Demonstrations of Varying Ability

Matthew Taylor, Halit Bener Suay, Sonia Chernova

B5: Auction and incentive design

Chair: Rajiv Maheswaran Room: 101B

Incentive Design for Adaptive Agents

Haoqi Zhang, Jerry Kung, Ariel Procaccia, David Parkes, Yiling Chen

A Truth Serum for Sharing Rewards

Arthur Carvalho, Kate Larson

Capability-Aligned Matching: Improving Quality of Games with a Purpose

Che-Liang Chiou, Jane Hsu

False-name-proof Mechanism Design without Money

Taiki Todo, Atsushi Iwasaki, Makoto Yokoo

Majority-Rule-Based Preference Aggregation on Multi-Attribute Domains with CP-Nets

Minyi Li, Bao Vo, Ryszard Kowalczyk

C5: Simulation and Emergence

Chair: Elizabeth Sklaar

Room: 101C

Emerging Cooperation on Complex Networks

Norman Salazar, Juan Antonio Rodriguez-Aguilar, Josep Lluís Arcos, Juan C. Burguillo

An Investigation of the Vulnerabilities of Scale Invariant Dynamics in Large Teams

Robin Glinton, Katia Sycara, Paul Scerri

The Evolution of Cooperation in Self-Interested Agent Societies: A Critical Study

Lisa-Maria Hofmann, Nilanjan Chakraborty, Katia Sycara

A Model of Norm Emergence and Innovation in Language Change

Samarth Swarup, Andrea Apolloni, Zsuzsanna Fagyal

Dynamic Level of Detail for Large Scale Agent-based Urban Simulations

Laurent Navarro, Fabien Flacher, Vincent Corruble

D5: Logic-Based Approaches II

Chair: Munindar Singh

Room: 101D

Reasoning About Local Properties in Modal Logic

Hans van Ditmarsch, Wiebe van der Hoek, Barteld Kooi

Knowledge and Control

Michael Wooldridge, Wiebe van der Hoek, Nicolas Troquard

Strategic Games and Truly Playable Effectivity Functions

Valentin Goranko, Wojciech Jamroga, Paolo Turrini

Scientia Potentia Est

Thomas Ågotnes, Wiebe van der Hoek, Michael Wooldridge

Tractable Model Checking for Fragments of Higher-Order Coalition Logic

Patrick Doherty, Barbara Dunin-Keplicz, Andrzej Szalas

Invited Talk

15:30-16:30

Chair: Peter Stone

Room: Banquet Hall

Continuous Visual Object Category Learning

Kristen Grauman

Poster/Demo Sessions		16:30-20:00
		Room: 201
Red Session	(see page 41)	17:00-18:00
Blue Session	(see page 44)	18:00-19:00
Green Session	(see page 47)	19:00-20:00

FRIDAY, MAY 6

Invited Talk 09:00-10:00

Chair: Pinar Yolum

Room: Banquet Hall

Developmental Constraints for Open-Ended Robot Learning

Pierre-Yves Oudeyer

Coffee Break 10:00-10:30

Session 6 10:30-12:10

A6: Robotics and Learning

Chair: Gal Kaminka

Room: 101A

Active Markov Information-Theoretic Path Planning for Robotic Environmental Sensing

Bryan Kian Hsiang Low, John Dolan, Pradeep Khosla

Horde: A Scalable Real-time Architecture for Learning Knowledge from Unsupervised Sensorimotor Int

Richard Sutton, Joseph Modayil, Michael Delp, Thomas Degris, Patrick Pilarski, Adam White, Doina Precup

On Optimizing Interdependent Skills: A Case Study in Simulated 3D Humanoid Robot Soccer

Daniel Urieli, Patrick MacAlpine, Shivaram Kalyanakrishnan, Yinon Bentor, Peter Stone

Metric Learning for Reinforcement Learning Agents

Matthew Taylor, Brian Kulis, Fei Sha

B6: Energy Applications

Chair: Janusz Marecki

Room: 101B

Cooperatives of Distributed Energy Resources for Efficient Virtual Power Plants

Georgios Chalkiadakis, Valentin Robu, Ramachandra Kota, Alex Rogers, Nick Jennings

How Agents Can Help Curbing Fuel Combustion - a Performance Study of Intersection Control

Natalja Pulter, Heiko Schepperle, Klemens Böhm

Decentralized Coordination Of Plug-in Hybrid Vehicles For Imbalance Reduction In A Smart Grid

Stijn Vandael, Klaas De Craemer, Nelis Boucké, Tom Holvoet, Geert Deconinck

Online Mechanism Design for Electric Vehicle Charging

Enrico Gerding, Valentin Robu, Sebastian Stein, David Parkes, Alex Rogers, Nick Jennings

C6: Voting Protocols

Chair: Takayuki Ito

Room: 101C

Homogeneity and Monotonicity of Distance-Rationalizable Voting Rules

Edith Elkind, Piotr Faliszewski, Arkadii Slinko

Possible Winners When New Alternatives Join: New Results Coming Up!

Lirong Xia, Jerome Lang, Jerome Monnot

The Complexity of Voter Partition in Bucklin and Fallback Voting: Solving Three Open Problems

Gabor Erdelyi, Lena Piras, Joerg Rothe

An Algorithm for the Coalitional Manipulation Problem under Maximin

Michael Zuckerman, Omer Lev, Jeffrey Rosenschein

Computational Complexity of Two Variants of the Possible Winner Problem

Dorothea Baumeister, Magnus Roos, Joerg Rothe

D6: Trust and Organizational Structure

Chair: Jordi Sabater

Room: 101D

Trust as Dependence: A Logical Approach

Munindar Singh

Multi-Layer Cognitive Filtering by Behavioral Modeling

Zeinab Noorian, Steve marsh, Michael Fleming

Argumentation-Based Reasoning in Agents with Varying Degrees of Trust

Simon Parsons, Yuqing Tang, Elizabeth Sklar, Kai Cai, Peter McBurney

A Particle Filter for Bid Estimation in Ad Auctions with Periodic Ranking Observations

David Pardoe, Peter Stone

Conviviality Measures

Patrice Caire, Leendert van der Torre, Baptiste Alcalde, Chattrakul Sombattheera

Lunch

12:10-13:00

Session 7

13:00-14:40

A7: Argumentation and Negotiation

Chair: Simon Parsons

Room: 101A

Choosing Persuasive Arguments for Action

Elizabeth Black, Katie Atkinson

Argumentation Strategies for Plan Resourcing

Chukwuemeka Emele, Timothy Norman, Simon Parsons

Multi-Criteria Argument Selection In Persuasion Dialogues

Tom van der Weide, Frank Dignum, John-Jules Meyer, Henry Prakken, Gerard Vreeswijk

Analyzing Intra-Team Strategies for Agent-based Negotiation Teams

Victor Sanchez-Anguix, Vicente Julian, Vicent Botti, Ana Garcia-Fornes

The Effect of Expression of Anger and Happiness in Computer Agents on Negotiations with Humans

Celso de Melo, Peter Carnevale, Jonathan Gratch

B7: Planning

Chair: Sven Koenig

Room: 101B

Toward Error-Bounded Algorithms for Infinite-Horizon DEC-POMDPs

Dibangoye Jilles, Abdel-Allah Mouaddib, Brahim Chaib-draa

Distributed Model Shaping for Scaling to Decentralized POMDPs with Hundreds of Agents

Prasanna Velagapudi, Pradeep Varakantham, Paul Scerri, Katia Sycara

Efficient Planning in R-max

Marek Grzes, Jesse Hoey

Multiagent Argumentation for Cooperative Planning in DeLP-POP

Pere Pardo, Sergio Pajares Ferrando, Eva Onaindia, Lluís Godo, Pilar Dellunde

C7: Game Theory II

Chair: Milind Tambe

Room: 101C

Computing a Self-Confirming Equilibrium in Two-Player Extensive-Form Games

Nicola Gatti, Fabio Panozzo, Sofia Ceppi

Computing Time-Dependent Policies for Patrolling Games with Mobile Targets

Branislav Bosansky, Viliam Lisy, Michal Jakob, Michal Pechoucek

Quality-bounded Solutions for Finite Bayesian Stackelberg Games: Scaling up

Manish Jain, Christopher Kiekintveld, Milind Tambe

Approximation Methods for Infinite Bayesian Stackelberg Games: Modeling Distributional Uncertainty

Christopher Kiekintveld, Janusz Marecki, Milind Tambe

Solving Stackelberg Games with Uncertain Observability

Dmytro Korzhyk, Vincent Conitzer, Ronald Parr

D7: Virtual Agents II

Chair: Von-Wun Soo

Room: 101D

A Style Controller for Generating Virtual Human Behaviors

Chung-Cheng Chiu, Stacy Marsella

The Face of Emotions: A Logical Formalization of Expressive Speech Acts

Nadine Guiraud, Dominique Longin, Emiliano Lorini, Sylvie Pesty, Jérémy Rivière

I've Been Here Before! Location and Appraisal in Memory Retrieval

Paulo Gomes, Ana Paiva, Carlos Martinho

From Body Space to Interaction Space - Modeling Spatial Cooperation for Virtual Humans

Nhung Nguyen, Ipke Wachsmuth

Effect of time delays on agents' interaction dynamics

Ken Prepin, Catherine Pelachaud

Community Meeting and Closing

14:40-16:00

Room: Banquet Hall

POSTER/DEMO SESSIONS

THURSDAY, MAY 5

Poster Session 16:30-20:00

Red Session 17:00-18:00

- | | |
|-------------|---|
| R 1 | A Computational Model of Achievement Motivation for Artificial Agents |
| R 2 | Incremental DCOP Search Algorithms for Solving Dynamic DCOPs |
| R 3 | MetaTrust: Discriminant Analysis of Local Information for Global Trust Assessment |
| R 4 | Efficient Penalty Scoring Functions for Group Decision-making with TCP-nets |
| R 5 | A Curious Agent for Network Anomaly Detection |
| R 6 | Agents, Pheromones, and Mean-Field Models |
| R 7 | Basis Function Discovery using Spectral Clustering and Bisimulation Metrics |
| R 8 | Incentive Compatible Influence Maximization in Social Networks and Application to Viral Marketing |
| R 9 | On Optimal Agendas for Package Deal Negotiation |
| R 10 | An Abstract Framework for Reasoning About Trust |
| R 11 | Message-Passing Algorithms for Large Structured Decentralized POMDPs |
| R 12 | Jogger: Models for Context-Sensitive Reminding |
| R 13 | Spatio-Temporal A* Algorithms for Offline Multiple Mobile Robot Path Planning |
| R 14 | Influence of Head Orientation in Perception of Personality Traits in Virtual Agents |
| R 15 | Conflict Resolution with Argumentation Dialogues |
| R 16 | Reasoning Patterns in Bayesian Games |
| R 17 | Using Coalitions of Wind Generators and Electric Vehicles for Effective Energy Market Participation |
| R 18 | Negotiation Over Decommitment Penalty |
| R 19 | Ship Patrol: Multiagent Patrol under Complex Environmental Conditions |
| R 20 | Empirical and Theoretical Support for Lenient Learning |
| R 21 | A Formal Framework for Reasoning about Goal Interactions |
| R 22 | On-line Reasoning for Institutionally-Situated BDI agents |
| R 23 | Strategy Purification |

R 24	Agent-Based Container Terminal Optimisation
R 25	Solving Delayed Coordination Problems in MAS
R 26	Human-like Memory Retrieval Mechanisms for Social Companions
R 27	Forgetting Through Generalisation - A Companion with Selective Memory
R 28	Representation of Coalitional Games with Algebraic Decision Diagrams
R 29	Game Theoretical Adaptation Model for Intrusion Detection System
R 30	Solving Strategic Bargaining with Arbitrary One-Sided Uncertainty
R 31	Manipulation in Group Argument Evaluation
R 32	Abstraction for Model Checking Modular Interpreted Systems over ATL
R 33	VIXEE an Innovative Communication Infrastructure for Virtual Institutions
R 34	Smart Walkers! Enhancing the Mobility of the Elderly
R 35	Modeling Empathy for a Virtual Human: How When and to What Extent?
R 36	Multi-Agent Abductive Reasoning with Confidentiality
R 37	Reasoning About Preferences in BDI Agent Systems
R 38	Arbitrators in Overlapping Coalition Formation Games
R 39	Learning the Demand Curve in Posted-Price Digital Goods Auctions
R 40	Designing Incentives for Boolean Games
R 41	Who Goes There? Selecting a Robot to Reach a Goal Using Social Regret
R 42	Exploration Strategies Based on Multi-Criteria Decision Making for Search and Rescue Autonomous Robots
R 43	Decomposing Constraint Systems: Equivalences and Computational Properties
R 44	Information Elicitation for Decision Making
R 45	Stable Partitions in Additively Separable Hedonic Games
R 46	Complexity of Coalition Structure Generation
R 47	Tight Bounds for Strategyproof Classification
R 48	A Study of Computational and Human Strategies in Revelation Games
R 49	Efficient Heuristic Approach to Dominance Testing in CP-nets
R 50	Resource-Aware Junction Trees for Efficient Multi-Agent Coordination
R 51	AgentScope: Multi-Agent Systems Development in Focus

R 52	Agent Programming with Priorities and Deadlines
R 53	Expert-Mediated Search
R 54	Commitments with Regulations: Reasoning about Safety and Control in $\{\text{sc Regula}\}$
R 55	Specifying and Applying Commitment-Based Business Patterns
R 56	Game Theory-Based Opponent Modeling in Large Imperfect-Information Games
R 57	Metastrategies in the Colored Trails Game
R 58	Computing Stable Outcomes in Hedonic Games with Voting-Based Deviations
R 59	Cognitive Policy Learner: Biasing Winning or Losing Strategies
R 60	Agent-Mediated Multi-Step Optimization for Resource Allocation in Distributed Sensor Networks
R 61	Integrating Reinforcement Learning with Human Demonstrations of Varying Ability
R 62	Incentive Design for Adaptive Agents
R 63	A Truth Serum for Sharing Rewards
R 64	Majority-Rule-Based Preference Aggregation on Multi-Attribute Domains with CP-Nets
R 65	Reasoning About Local Properties in Modal Logic
R 66	Knowledge and Control
R 67	Strategic Games and Truly Playable Effectivity Functions
R 68	Scientia Potentia Est
R 69	Active Markov Information-Theoretic Path Planning for Robotic Environmental Sensing
R 70	Horde: A Scalable Real-time Architecture for Learning Knowledge from Unsupervised Sensorimotor Interaction
R 71	Metric Learning for Reinforcement Learning Agents
R 72	Cooperatives of Distributed Energy Resources for Efficient Virtual Power Plants
R 73	How Agents Can Help Curbing Fuel Combustion -- a Performance Study of Intersection Control for Fuel-Operated Vehicles
R 74	Homogeneity and Monotonicity of Distance-Rationalizable Voting Rules
R 75	Possible Winners When New Alternatives Join: New Results Coming Up!
R 76	Conviviality Measures
R 77	Analyzing Intra-Team Strategies for Agent-Based Negotiation Teams

R 78	The Effect of Expression of Anger and Happiness in Computer Agents on Negotiations with Humans
R 79	Computing a Self-Confirming Equilibrium in Two-Player Extensive-Form Games

Blue Session		18:00-19:00
B 1	Probabilistic Hierarchical Planning over MDPs	
B 2	Can Trust Increase the Efficiency of Cake Cutting Algorithms?	
B 3	Decentralized Decision Support for an Agent Population in Dynamic and Uncertain Domains	
B 4	Adaptive Decision Support for Structured Organizations: A Case for OrgPOMDPs	
B 5	iCLUB: An Integrated Clustering-Based Approach to Improve the Robustness of Reputation Systems	
B 6	Effective Variants of Max-Sum Algorithm to Radar Coordination and Scheduling	
B 7	Improved Computational Models of Human Behavior in Security Games	
B 8	Agent-Based Resource Allocation in Dynamically Formed CubeSat Constellations	
B 9	A Simple Curious Agent to Help People be Curious	
B 10	Social Instruments for Convention Emergence	
B 11	Learning By Demonstration in Repeated Stochastic Games	
B 12	Maximizing Revenue in Symmetric Resource Allocation Systems When User Utilities Exhibit Diminishing Returns	
B 13	Collaborative Diagnosis of Exceptions to Contracts	
B 14	Genetic Algorithm Aided Optimization of Hierarchical Multiagent System Organization	
B 15	Complexity of Multiagent BDI Logics with Restricted Modal Context	
B 16	Extension of MC-net-based Coalition Structure Generation: Handling Negative Rules and Externalities	
B 17	Diagnosing Commitments: Delegation Revisited	
B 18	ADAPT: Abstraction Hierarchies to Succinctly Model Teamwork	
B 19	Rip-off: Playing the Cooperative Negotiation Game	
B 20	Interfacing a Cognitive Agent Platform with a Virtual World: a Case Study using Second Life	

B 21	Message-Generated Kripke Semantics
B 22	Substantiating Quality Goals with Field Data for Socially-Oriented Requirements Engineering
B 23	Normative Programs and Normative Mechanism Design
B 24	Privacy-Intimacy Tradeoff in Self-disclosure
B 25	Reasoning About Norm Compliance
B 26	Emergence of Norms for Social Efficiency in Partially Iterative Non-Coordinated Games
B 27	On the Construction of Joint Plans through Argumentation Schemes
B 28	Team Coverage Games
B 29	Agent-based Inter-Company Transport Optimization
B 30	Belief/Goal Sharing BDI Modules
B 31	Neural Symbolic Architecture for Normative Agents
B 32	No Smoking Here: Compliance Differences Between Legal and Social Norms
B 33	Agents That Speak: Modelling Communicative Plans and Information Sources in a Logic of Announcements
B 34	Procedural Fairness in Stable Marriage Problems
B 35	Tag-Based Cooperation in N-Player Dilemmas
B 36	Heuristic Multiagent Planning with Self-Interested Agents
B 37	Mining Qualitative Context Models from Multiagent Interactions
B 38	Partially Observable Stochastic Game-based Multi-Agent Prediction Markets
B 39	Agent-Based Control for Decentralised Demand Side Management in the Smart Grid
B 40	Multi-Agent Monte Carlo Go
B 41	On the Outcomes of Multiparty Persuasion
B 42	Ties Matter: Complexity of Voting Manipulation Revisited
B 43	Online Anomaly Detection in Unmanned Vehicles
B 44	Tree Adaptive A* for Goal-Directed Navigation in Initially Unknown Terrain
B 45	Decentralized Monitoring of Distributed Anytime Algorithms
B 46	Consensus Acceleration in Multiagent Systems with the Chebyshev Semi-Iterative Method

B 47	Equilibrium Approximation in Simulation-Based Extensive-Form Games
B 48	Maximum Causal Entropy Correlated Equilibria for Markov Games
B 49	Cooperation through Reciprocity in Multiagent Systems: An Evolutionary Analysis
B 50	A Framework for Coalitional Normative Systems
B 51	Scenarios for System Requirements Traceability and Testing
B 52	Bounded Decentralised Coordination over Multiple Objectives
B 53	Communication-Constrained DCOPs: Message Approximation in GDL with Function Filtering
B 54	Rich Goal Types in Agent Programming
B 55	Using Aspiration Adaptation Theory to Improve Learning
B 56	Culture-related Differences in Aspects of Behavior for Virtual Characters Across Germany and Japan
B 57	Information-Driven Interaction-Oriented Programming: BSPL the Blindingly Simple Protocol Language
B 58	On Topic Selection Strategies in Multi-Agent Naming Game
B 59	Reaching Correlated Equilibria Through Multi-agent Learning
B 60	Sequential Targeted Optimality as a New Criterion for Teaching and Following in Repeated Games
B 61	On the Quality and Complexity of Pareto Equilibria in the Job Scheduling Game
B 62	Empirical Evaluation of Ad Hoc Teamwork in the Pursuit Domain
B 63	Decision Theoretic Behavior Composition
B 64	Capability-Aligned Matching: Improving Quality of Games with a Purpose
B 65	Emerging Cooperation on Complex Networks
B 66	The Evolution of Cooperation in Self-Interested Agent Societies: A Critical Study
B 67	Dynamic Level of Detail for Large Scale Agent-Based Urban Simulations
B 68	Tractable Model Checking for Fragments of Higher-Order Coalition Logic
B 69	On Optimizing Interdependent Skills: A Case Study in Simulated 3D Humanoid Robot Soccer
B 70	Online Mechanism Design for Electric Vehicle Charging

B 71	The Complexity of Voter Partition in Bucklin and Fallback Voting: Solving Three Open Problems
B 72	An Algorithm for the Coalitional Manipulation Problem under Maximin
B 73	Argumentation-Based Reasoning in Agents with Varying Degrees of Trust
B 74	Choosing Persuasive Arguments for Action
B 75	Toward Error-Bounded Algorithms for Infinite-Horizon DEC-POMDPs
B 76	Distributed Model Shaping for Scaling to Decentralized POMDPs with Hundreds of Agents
B 77	Computing Time-Dependent Policies for Patrolling Games with Mobile Targets
B 78	I've Been Here Before! Location and Appraisal in Memory Retrieval
B 79	From Body Space to Interaction Space - Modeling Spatial Cooperation for Virtual Humans

Green Session		19:00-20:00
G 1	A Cost-Based Transition Approach for Multiagent Systems Reorganization	
G 2	Towards an Agent-Based Proxemic Model for Pedestrian and Group Dynamics: Motivations and First Experiments	
G 3	Batch Reservations in Autonomous Intersection Management	
G 4	Multi-Agent, Potential-Based Reward Shaping for RoboCup KeepAway	
G 5	Approximating Behavioral Equivalence of Models Using Top-K Policy Paths	
G 6	Reflection about Capabilities for Role Enactment	
G 7	Prognostic Normative Reasoning in Coalition Planning	
G 8	Virtual Agent Perception in Large Scale Multi-Agent Based Simulation Systems	
G 9	A Formal Analysis of the Outcomes of Argumentation-based Negotiations	
G 10	Modeling the Emergence of Norms	
G 11	Introducing Homophily to Improve Semantic Service Search in a Self-adaptive System	
G 12	Adaptive Regulation of Open MAS: an Incentive Mechanism based on Modifications of the Environment	
G 13	Allocating Spatially Distributed Tasks in Large Dynamic Robot Teams	
G 14	Bounded Optimal Team Coordination with Temporal Constraints and Delay Penalties	
G 15	A Perception Framework for Intelligent Characters in Serious Games	

G 16	SR-APL: A Model for a Programming Language for Rational BDI Agents with Prioritized Goals
G 17	Designing Petri Net Supervisors for Multi-Agent Systems from LTL Specifications
G 18	Friend or Foe? Detecting an Opponent's Attitude in Normal Form Games
G 19	The BDI Driver in a Service City
G 20	Identifying and Exploiting Weak-Information Inducing Actions in Solving POMDPs
G 21	Teamwork in Distributed POMDPs: Execution-time Coordination Under Model Uncertainty
G 22	Escaping Local Optima in POMDP Planning as Inference
G 23	Toward Human Interaction with Bio-Inspired Teams
G 24	Escaping Heuristic Depressions in Real-Time Heuristic Search
G 25	Pseudo-tree-based Algorithm for Approximate Distributed Constraint Optimization with Quality Bounds
G 26	Concise Characteristic Function Representations in Coalitional Games Based on Agent Types
G 27	Iterative Game-theoretic Route Selection for Hostile Area Transit and Patrolling
G 28	Abduction Guided Query Relaxation
G 29	A Message Passing Approach To Multiagent Gaussian Inference for Dynamic Processes
G 30	Multiagent Environment Design in Human Computation
G 31	Social Distance Games
G 32	Agent Sensing with Stateful Resources
G 33	Modeling Bounded Rationality of Agents During Interactions
G 34	Comparing Action-Query Strategies in Semi-Autonomous Agents
G 35	A Multimodal End-of-Turn Prediction Model: Learning from Parasocial Consensus Sampling
G 36	Scalable Adaptive Serious Games using Agent Organizations
G 37	Integrating power and reserve trade in electricity networks
G 38	Deploying Power Grid-Integrated Electric Vehicles as a Multi-Agent System
G 39	Towards a Unifying Characterization for Quantifying Weak Coupling in Dec-POMDPs

G 40	GUARDS - Game Theoretic Security Allocation on a National Scale
G 41	Simulation-based Temporal Projection of Everyday Robot Object Manipulation
G 42	Quality Guarantees for Region Optimal DCOP Algorithms
G 43	Distributed Algorithms for Solving the Multiagent Temporal Decoupling Problem
G 44	Learning Action Models for Multi-Agent Planning
G 45	Theoretical Considerations of Potential-Based Reward Shaping for Multi-Agent Systems
G 46	Evolving Subjective Utilities: Prisoner's Dilemma Game Examples
G 47	Distributed Cooperation in Wireless Sensor Networks
G 48	Practical Argumentation Semantics for Socially Efficient Defeasible Consequence
G 49	Taming the Complexity of Linear Time BDI Logics
G 50	Kokomo: An Empirically Evaluated Methodology for Affective Applications
G 51	Programming Mental State Abduction
G 52	Possible And Necessary Winners In Voting Trees: Majority Graphs Vs. Profiles
G 53	A Double Oracle Algorithm for Zero-Sum Security Games on Graphs
G 54	Modeling Social Preferences in Multi-player Games
G 55	Less Is More: Restructuring Decisions to Improve Agent Search
G 56	Controlling Narrative Time in Interactive Storytelling
G 57	ESCAPES: Evacuation Simulation with Children, Authorities, Parents, Emotions, and Social Comparison
G 58	On the Verification of Social Commitments and Time
G 59	False-name Bidding in First-price Combinatorial Auctions with Incomplete Information
G 60	Solving Election Manipulation Using Integer Partitioning Problems
G 61	Using Iterated Reasoning to Predict Opponent Strategies
G 62	False-name-proof Mechanism Design without Money
G 63	An Investigation of the Vulnerabilities of Scale Invariant Dynamics in Large Teams
G 64	A Model of Norm Emergence and Innovation in Language Change
G 65	Decentralized Coordination Of Plug-in Hybrid Vehicles For Imbalance Reduction In A Smart Grid
G 66	Computational Complexity of Two Variants of the Possible Winner Problem

G 67	Trust as Dependence: A Logical Approach
G 68	Multi-Layer Cognitive Filtering by Behavioral Modeling
G 69	A Particle Filter for Bid Estimation in Ad Auctions with Periodic Ranking Observations
G 70	Argumentation Strategies for Plan Resourcing
G 71	Multi-Criteria Argument Selection In Persuasion Dialogues
G 72	Efficient Planning in R-max
G 73	Multiagent Argumentation for Cooperative Planning in DeLP-POP
G 74	Quality-bounded Solutions for Finite Bayesian Stackelberg Games: Scaling up
G 75	Approximation Methods for Infinite Bayesian Stackelberg Games: Modeling Distributional Payoff Uncertainty
G 76	Solving Stackelberg Games with Uncertain Observability
G 77	A Style Controller for Generating Virtual Human Behaviors
G 78	The Face of Emotions: A Logical Formalization of Expressive Speech Acts
G 79	Effect of Time Delays on Agents' Interaction Dynamics

Demo Session	16:30-20:00
Chair: Elizabeth Sklar	Room: 201

- DM1 BDI Agent model Based Evacuation Simulation**
Masaru Okaya, Tomoichi Takahashi
- DM2 An Interactive Tool for Creating Multi-Agent Systems and Interactive Agent-based Games**
Henrik Hautop Lund, Luigi Pagliarini
- DM3 Towards Robot Incremental Learning Constraints from Comparative Demonstration**
Rong Zhang, Shangfei Wang, Xiaoping Chen, Dong Yin, Shijia Chen, Min Cheng, Yanpeng Lv, Jianmin Ji, Dejian Wang, Peijia Shen
- DM4 Teleworkbench: Validating Robot Programs from Simulation to Prototyping with Minirobots**
A. Tanoto, F. Werner, U. Rückert, H. Li

DM5 A MAS Decision Support Tool for Water-Right Markets

A. Giret, A. Garrido, J.A. Gimeno, Vicente Bottihas, P. Noriega

DM6 An Implementation of Basic Argumentation Components

Mikołaj Podlaszewskih, Martin Caminada, Gabriella Pigozzi

DM7 AgentC: Agent-based System for Securing Maritime Transit

Michal Jakobhas, Ondřej Vaněkhas, Branislav Bošanský, Ondřej Hrstka, Michal Pěchouček

DM8 Bee-Inspired Foraging In An Embodied Swarm

Sjriek Alers, Daan Bloembergen, Daniel Hennes, Steven de Jong, Michael Kaisers, Nyree Lemmens, Karl Tuyls, Gerhard Weiss

DM9 The Social Ultimatum Game and Adaptive Agents

Yu-Han Chang, Rajiv Maheswaran

DM10 DipTools: Experimental Data Visualization Tool for the DipGame Testbed

Angela Fabregues, David López-Paz, Carles Sierra

DM11 TALOS: A Tool for Designing Security Applications with Mobile Patrolling Robots

Nicola Basilico, Nicola Gattih, Pietro Testa

DM12 Vision-Based Obstacle Run for Teams of Humanoid Robots

Jacky Baltes, Chi Tai Cheng, Jonathan Bagot

DM13 Evolutionary Design of Agent-based Simulation Experiments

James Decraene, Yew Ti Lee, Fanchao Zeng, Mahinthan Chandramohan, Yong Yong Cheng, Malcolm Yoke Hean Low

DM14 Interactive Storytelling with Temporal Planning

Julie Porteous, Jonathan Teutenberg, Fred Charles, Marc Cavazzahas

DM15 Agent-based Network Security Simulation

Dennis Grunewald, Marco Lützenberger, Joël Chinnow, Rainer Bye, Karsten Bsfuka, Sahin Albayrakhas

DM16 Experimental Evaluation of Teamwork in Many-Robot Systems

Andrea D'Agostini, Daniele Calisi, Alberto Leo, Francesco Fedi, Luca Iocchi, Daniele Nardi

INVITED TALKS

Evolutionary Individual-Based Models and Their Applications in Problem Solving and Games



David B. Fogel

Natural Selection, Inc., San Diego, CA

http://www.natural-selection.com/people_dfogel.html

Abstract:

Evolutionary computation is a machine learning approach that seeks inspiration from nature's processes of natural selection and variation. The field of evolutionary computation is broad, and encompasses many different inspirations from nature that include modeling at the species, individual, and genetic levels. Theoretical results for the learning properties of these algorithms have been offered, although some have been reanalyzed and corrected within the last decade. Evolutionary individual-based models are simulations that incorporate individual purpose-driven agents that are subject to natural selection and variation. It is possible to employ these models to solve problems in industry and other disciplines, but also to potentially gain insight in ecologies and animal behavior. In particular, aspects of evolutionary game theory can be compared to evolutionary individual-based modeling. The results from these two approaches are often quite different. Several results will be offered that highlight these differences. It is of interest to determine which may have greater fidelity in predicting aspects of the real world.

Bio:

Dr. David Fogel is president of Natural Selection, Inc., a recognized leading firm in the area of bio-inspired problem solving. He is also CEO of Natural Selection Financial, Inc., a registered investment advisor company that uses evolutionary algorithms and computational intelligence for improving financial market forecasting. Dr. Fogel received the Ph.D. in engineering sciences (systems science) from UCSD in 1992. He has an honorary doctorate from the University of Pretoria (2008). Dr. Fogel was president of the IEEE Computational Intelligence Society (2008-

2009), founding editor-in-chief of the IEEE Transactions on Evolutionary Computation (1996-2002), editor-in-chief of BioSystems (2000-2008), and has authored over 200 publications and 6 books, including *Blondie24: Playing at the Edge of AI*.

Dr. Fogel is an IEEE fellow and has received several honors and awards, including the 2002 Sigma Xi Southwest Region Young Investigator Award, the 2003 Sigma Xi San Diego Section Distinguished Scientist Award, the 2003 SPIE Computational Intelligence Pioneer Award, the 2004 IEEE Kiyo Tomiyasu Technical Field Award, the 2007 IEEE Computational Intelligence Society Meritorious Service Award, and most recently the 2008 IEEE Computational Intelligence Society Evolutionary Computation Pioneer Award.

Beyond Nash Equilibrium: Solution Concepts for the 21st Century



Joe Halpern

Cornell University

<http://www.cs.cornell.edu/home/halpern/>

Abstract:

Nash equilibrium is the most commonly-used notion of equilibrium in game theory. However, it suffers from numerous problems. Some are well known in the game theory community; for example, the Nash equilibrium of repeated prisoner's dilemma is neither normatively nor descriptively reasonable. However, new problems arise when considering Nash equilibrium from a computer science perspective: for example, Nash equilibrium is not robust (it does not tolerate "faulty" or "unexpected" behavior), it does not deal with coalitions, it does not take computation cost into account, and it does not deal with cases where players are not aware of all aspects of the game. In this talk, I discuss solution concepts that try to address these shortcomings of Nash equilibrium. This talk represents joint work with various collaborators, including Ittai Abraham, Danny Dolev, Rica Gonen, Rafael Pass, and Leandro Rego. No background in game theory will be presumed.

Bio:

Joseph Halpern received a B.Sc. in mathematics from the University of Toronto in 1975 and a Ph.D. in mathematics from Harvard in 1981. In between, he spent two years as the head of the Mathematics Department at Bawku Secondary School, in Ghana. After a year as a visiting scientist at MIT, he joined the IBM Almaden Research Center in 1982, where he remained until 1996, also serving as a consulting professor at Stanford. In 1996, he joined the CS Department at Cornell, where is now department chair.

Halpern's major research interests are in reasoning about knowledge and uncertainty, security, distributed computation, decision theory, and game theory. Together with his former student, Yoram Moses, he pioneered the approach of applying reasoning about knowledge to analyzing distributed protocols and multi-agent systems. He has coauthored 6 patents, two books ("Reasoning About Knowledge" and "Reasoning about Uncertainty"), and over 300 technical publications.

Halpern is a Fellow of the AAI, the ACM, and the AAAS. Among other awards, he received the Dijkstra Prize in 2009, the ACM/AAAI Newell Award in 2008, the Godel Prize in 1997, was a Guggenheim Fellow in 2001-02, and a Fulbright Fellow in 2001-02 and 2009-10. Two of his papers have won best-paper prizes at IJCAI (1985 and 1991), and another won one at the Knowledge Representation and Reasoning Conference (2006). He was editor-in-chief of the Journal of the ACM (1997-2003) and has been program chair of a number of conferences, including the Symposium on Theory in Computing (STOC), Logic in Computer Science (LICS), Uncertainty in AI (UAI), Principles of Distributed Computing (PODC), and Theoretical Aspects of Rationality and Knowledge (TARK).

Continuous Visual Object Category Learning



Kristen Grauman

The University of Texas

<http://www.cs.utexas.edu/~grauman/>

Abstract:

How should an agent learn about visual objects? Object recognition techniques typically follow a one-time, one-pass learning pipeline: given some manually labeled exemplars, they train a model per category, and then can identify those same objects in novel images. While effective on prepared datasets, the strategy is not scalable and assumes a fixed category domain. We instead consider visual learning as a continuous process, in which the algorithm constantly analyzes unlabeled image data in order to both strengthen and expand its set of category models. In this talk, I present an approach that actively seeks human annotators' help when it is most needed, and autonomously discovers novel objects by mining new data. I show how to address important technical challenges in large-scale active visual learning, such as accounting for the information/effort tradeoff inherent to annotation requests, surveying massive unlabeled data pools, and targeting questions to many annotators working in parallel. Finally, I show how the system can more effectively discover novel objects in the context of those that were previously taught, pacing itself according to the predicted difficulty of the tasks. The proposed techniques yield state-of-the-art object detection results, and offer a new view of visual object learning as an interactive and ongoing process.

This talk describes work with Yong Jae Lee and Sudheendra Vijayanarasimhan.

Bio:

Kristen Grauman is the Clare Boothe Luce Assistant Professor in the Department of Computer Science at the University of Texas at Austin. Before joining UT-Austin in 2007, she received a PhD

in computer science from MIT, and a BA in computer science from Boston College. Her research in computer vision and machine learning focuses on visual search and object recognition. Work with her co-authors on large-scale visual search for learned metrics received the Best Student Paper Award at the IEEE Conference on Computer Vision and Pattern Recognition (CVPR) in 2008. Grauman serves regularly on the program committees for computer vision conferences and is a member of the editorial board for the International Journal of Computer Vision. She is a Microsoft Research New Faculty Fellow, and a recipient of an NSF CAREER award and the Howes Scholar Award in Computational Science.

Developmental Constraints for Open-Ended Robot Learning



Pierre-Yves Oudeyer

INRIA, Bordeaux Sud-Ouest

<http://www.pyoudeyer.com/>

Abstract:

Developmental robotics aim at building robots which, once “out of the factory” and in the “wild” of the real-world, should be capable of learning cumulatively an open-ended repertoire of new skills, both through self-experimentation and social interaction with humans. A major challenge that has to be faced is that the sensorimotor spaces encountered by such robots, including the interaction of their body with novel external objects and persons, are high-volume, high-dimensional, unbounded and partially unlearnable. If one wants robots to be capable of efficient learning in such spaces, one must take inspiration from infant development which shows the importance of various families of developmental constraints. In this talk, I will review several of these constraints, including mechanisms for curiosity-driven learning, maturation, sensorimotor primitives, joint attention and joint intention in social guidance, self-organization, and morphological computation, and show how they can allow to transform apparently daunting machine learning problems into much more tractable problems.

Bio:

Dr. Pierre-Yves Oudeyer is responsible of the FLOWERS team at INRIA. Before, he has been a permanent researcher in Sony Computer Science Laboratory for 8 years (1999-2007). He studied theoretical computer science at Ecole Normale Supérieure in Lyon, and received his Ph.D. degree in artificial intelligence from the University Paris VI, France. After working on computational models of language evolution, he is now working on developmental and social robotics, focusing on sensorimotor development, language acquisition and life-long learning in robots. Strongly inspired by infant development, the mechanisms he studies include artificial curiosity, intrinsic

motivation, the role of morphology in learning motor control, human-robot interfaces, joint attention and joint intentional understanding, and imitation learning. He has published a book, more than 80 papers in international journals and conferences, holds 8 patents, gave several invited keynote lectures in international conferences, and received several prizes for his work in developmental robotics and on the origins of language. In particular, he is laureate of the ERC Starting Grant EXPLORERS. He is editor of the IEEE CIS Newsletter on Autonomous Mental Development, and associate editor of IEEE Transactions on Autonomous Mental Development, Frontiers in Neurorobotics, and of the International Journal of Social Robotics Web: <http://www.pyoudeyer.com> and <http://flowers.inria.fr>

AWARDS

ACM SIGART Autonomous Agents Research Award

The ACM SIGART Autonomous Agents Research Award is an annual award for excellence in research in the area of autonomous agents. The award is intended to recognize researchers in autonomous agents whose current work is an important influence on the field. The award is an official ACM award, funded by an endowment created by ACM SIGART from the proceeds of previous Autonomous Agents conferences. Candidates for the award are nominated through an open nomination process. Previous winners of the SIGART Autonomous Research Award were Jonathan Gratch and Stacy Marsella (2010), Manuela Veloso (2009), Yoav Shoham (2008), Sarit Kraus (2007), Michael Wooldridge (2006), Milind Tambe (2005), Makoto Yokoo (2004), Nick Jennings (2003), Katia Sycara (2002), and Tuomas Sandholm (2001).

The 2011 ACM SIGART Autonomous Agents Research Award recipient is Joe Halpern from Cornell University.

IFAAMAS Victor Lesser Distinguished Dissertation Award

This award was started for dissertations defended in 2006 and is named for Professor Victor Lesser, a long standing member of the AAMAS community who has graduated a large number of outstanding PhD students in the area. To be eligible for the 2010 award, a dissertation had to have been written as part of a PhD defended during the year 2010, and had to be nominated by the supervisor with three supporting references. Selection is based on originality, depth, impact and written quality, supported by quality publications. Previous winners of this award were Andrew Gilpin (2009), Ariel Procaccia (2008), Radu Jurca (2007), and Vincent Conitzer (2006).

The 2010 IFAAMAS Victor Lesser Distinguished Dissertation Award recipient is Dr. Bo An of University of Massachusetts at Amherst (advised by Prof. Victor R. Lesser), with his dissertation “Automated Negotiation for Complex Multi-agent Resource Allocation”. Due to the extremely close competition this year, two additional candidates were selected for runner-up prizes. In particular, these are Dr. Chih-Han Yu of Harvard University (advised by Prof. Radhika Nagpal) and Dr. Mingyu Guo of Duke University (advised by Prof. Vincent Conitzer).

IFAAMAS Award for Influential Papers

The International Foundation for Autonomous Agents and Multi-Agent Systems set up an influential paper award in 2006 to recognize publications that have made seminal contributions to the field. Such papers represent the best and most influential work in the area of autonomous agents and multi-agent systems. These papers might, therefore, have proved a key result, led to the development of a new sub-field, demonstrated a significant new application or system, or simply presented a new way of thinking about a topic that has proved influential. The award is open to any paper that was published at least 10 years before the award is made. The paper can have been published in any journal, conference, or workshop. The award is sponsored by the Agent Theories, Architectures and Languages foundation.

The winner of the 2011 IFAAMAS Influential Paper Award is:

Yoav Shoham (1993), Agent-oriented programming, *Artificial Intelligence*, 60, pp.51-92.

Best Paper Nominees

Designing Incentives for Boolean Games

Ulle Endriss, Sarit Kraus, Jerome Lang, Michael Wooldridge

Ties Matter: Complexity of Voting Manipulation Revisited

Svetlana Obraztsova, Edith Elkind, Noam Hazon

On the Outcomes of Multiparty Persuasion

Elise Bonzon, Nicolas Maudet

Multi-Agent Monte Carlo Go

Leandro Soriano Marcolino, Hitoshi Matsubara

Best Student Paper Nominees

Learning the Demand Curve in Posted-Price Digital Goods Auctions

Meenal Chhabra, Sanmay Das

Arbitrators in Overlapping Coalition Formation Games

Yair Zick, Edith Elkind

Towards a Unifying Characterization for Quantifying Weak Coupling in Dec-POMDPs

Stefan Witwicki, Ed Durfee

Best Innovative Application Paper Nominees

Agent-Based Control for Decentralised Demand Side Management in the Smart Grid

Sarvapali Ramchurn, Perukrishnen Vytelingum, Alex Rogers, Nick Jennings

GUARDS - Game Theoretic Security Allocation on a National Scale

James Pita, Milind Tambe, Christopher Kiekintveld, Shane Cullen, Erin Steigerwald

Deploying Power Grid-Integrated Electric Vehicles as a Multi-Agent System

Sachin Kamboj, Willett Kempton, Keith Decker

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Taiwanese Association of Artificial
Intelligence



National Tsing Hua University

SOCIAL PROGRAMME

Welcome Reception

Date	Tuesday, May 3
Time	18:00-19:30
Location	Banquet Hall
Remarks	All registrants are cordially invited; all attendees are requested to wear the AAMAS 2011 name badges.

Conference Banquet

Date	Wednesday, May 4
Time	18:30-20:30
Location	The Grand Ballroom, the Grand Hotel Taipei
Remarks	All attendees are requested to present pre-purchased banquet coupon. Limited supplies of banquet coupons are available at the Registration Desk for NT\$4,000.
Shuttle Bus	Shuttle bus to the Grand Hotel Taipei from the conference venue operates from 17:30 till 17:45. Shuttle bus to the conference venue from the Grand Hotel Taipei operates from 20:30 till 21:00.



The Grand Hotel is a landmark established in May 1952 and the main building was completed on October 10, 1973. The main building of the hotel is the world's tallest Chinese classical building; it is 87 metres (285 ft) high. It was also the tallest building in Taiwan from 1973 to 1981.

GENERAL INFORMATION

Venue

Taipei International Convention Center (TICC)

No.1 Hsin-Yi Rd., Sec.5, Taipei, Taiwan

Tel: +886-2-2725-5200

Secretariat Room

Room 105

Operating Hours:

May 2-May 6 08:00-17:00

Registration, Information and Tour Counter

Lobby

Operating Hours:

May 2-May 5 08:00-17:00

Friday, May 6 08:00-12:00

Badges

Please ensure to wear your badge at all times to receive the entitlement to the registered courses and social programs, there may also be coupons placed in your badge to exchange for additional purchase.

Lunch

Registrants are entitled to one complimentary lunch box at VIP Room on Friday, May 6.

Nearby Restaurants

TICC International Lounge (2nd Floor)

Business hours: Monday to Friday 12:00 - 14:00

Food service: Gourmet lunch buffet

Price: NT\$500+10% per person

TICC Corner Café (1st Floor)

Business hours: Monday to Friday 08:30 – 17:00

Food service: Noodle Soup, Coffee, Dessert, etc.

Taipei 101 Grand Market (B1)

Business hours: Sunday to Thursday 11:00-21:30; Friday and Saturday 11:00-22:00

Food service: more than 31 selections of fast food restaurants.

Insurance

The Organizers of AAMAS 2011 do not provide insurance and do not take responsibility for any loss, accident, or illness that might occur during the Conference or in the course of travel to or from the meeting site. It is, therefore, the responsibility of the participants to check their coverage with their insurance provider.

Bank, Currency, Credit Cards

The currency is the New Taiwan Dollar (NTD). The exchange rate in recent months is around NT\$29 for US\$1. Foreign currencies can be exchanged at hotels, airports and government-designated banks. Major credit cards are widely accepted, and traveler's checks may also be accepted by tourist-oriented shops, hotels and banks.

Tipping

A 10% service charge is automatically added to room rates and meals. All other tipping is optional.

Internet Access

Wireless internet is available throughout the meeting rooms and public areas of TICC.

Domain Name: TICC (*Password is not required*)

Author Instructions (*Oral Presentation*)

Technical session rooms are equipped with projector and laptop with Microsoft XP. Presenters are requested to upload their presentations to the room laptop using USB stick. The laptops are equipped with Microsoft PowerPoint, Adobe Reader, Windows Media Player, QuickTime, Flash Player, and PostScript file (for gsview).

Author Instructions (*Poster Presentation*)

Authors are requested to setup their posters on Wednesday morning between 10:00 to 13:30 using the adhesive tape provided at the poster workstation. Please ensure to remove posters on Friday morning between 10:30 to 12:00.

Electricity

Taiwan uses electric current of 110 volts at 60 cycles, appliances from Europe, Australia or South-East Asia will need an adaptor or transformer. Many buildings have sockets with 220 volts especially for the use of air conditioners.

Tourist Information

Optional tours can be booked at the Tour Desk at the lobby besides the registration counter. For more information, please visit: <http://www.aamas2011.tw/OptionalTours.html>

Useful Phone Numbers

Taiwan Taoyuan International Airport	+886-3-398-3728
Tourism Bureau	+886-2-2349-1500
Foreign Affairs Division, Taipei Office	+886-2-2348-2999
Emergency Service	110

Travel in Taiwan

Airport Express Bus

Airport express bus between the Taoyuan International Airport and the Grand Hyatt Taipei (nearest hotel by the conference venue) is available through Air Bus East Line, and the cost is NT\$145 for one way ticket.

Taxi

Taxi in Taipei charges are NT\$70 for the first 1.25 km and NT\$5 for each additional 250 meters. An additional NT\$5 is charged for every two minutes of waiting, and a 20% surcharge is added to fares between 11 p.m. and 6 a.m. Airport Taxis charge according to the meter plus a 15% surcharge (highway tolls not included). Typical fare to Taipei is around NT\$1,200. Most drivers do not speak English, so it is a good idea to have hotel personnel write both your destination and your hotel's name and address in Chinese, along with the projected cost of each one-way trip.

MRT

Travel to the conference venue by Mass Rapid Transit (MRT) is available through the Metro Taipei Banqiao Nangang Line (Blue Line). The nearest station is the Taipei City Hall Station (Exit No.2). Single journey ticket ranges from NT\$20 to NT\$65 depending on traveling distance. MRT operating hours are 06:00~24:00. For further information on Metro Taipei and schedule, please visit the Metro Taipei website. <http://www.trtc.com.tw>

City Bus

A single section fare for city bus is NT\$15. Pay upon boarding or departure according to the instructions. For further information on bus route and schedule, please visit the Taipei e-bus System website. <http://www.e-bus.taipei.gov.tw/>

Taiwan High Speed Rail

The most convenient way to travel from Taipei City to Kaohsiung City is by the Taiwan High Speed Rail (THSR), an express train that is capable of running up to 300 km/h in 90 minutes. For further information on THSR route and schedule, please visit Taiwan High Speed Rail website. <http://www.thsrc.com.tw>

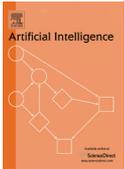
Shuttle Bus Time Schedule

Date	Departure Time	Depart From	Destination
May 2	08:00	Palais de Chine Hotel <i>(Official Hotel)</i>	TICC <i>(Conference Venue)</i>
	18:15	TICC	Palais de Chine Hotel
May 3	08:00	Palais de Chine Hotel	TICC
	19:45	TICC	Palais de Chine Hotel
May 4	08:00	Palais de Chine Hotel	TICC
	17:30	TICC	The Grand Hotel Taipei <i>(Banquet Venue)</i>
	18:00	TICC	Palais de Chine Hotel
	20:45	The Grand Hotel Taipei	Palais de Chine Hotel
	20:45	The Grand Hotel Taipei	TICC
May 5	08:00	Palais de Chine Hotel	TICC
	20:00	TICC	Palais de Chine Hotel
May 6	08:00	Palais de Chine Hotel	TICC
	16:00	TICC	Palais de Chine Hotel

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