AAAI-12 Preliminary Technical Schedule

*** In front of a paper title denotes a full paper to be presented as a poster only.*

Monday, July 23

Programs being held on Monday, July 23 include EAAI, Tutorials, Workshops, the Doctoral Consortium, and the Poker Competition Symposium. For complete details on these programs, please consult the AAAI-12 website.

(The IAAI and EAAI invited speakers have been inserted into this schedule. For the full IAAI and EAAI schedules, please see their respective websites, http://www.aaai.org/Conferences/IAAI/iaai12.php and http://eaai.stanford.edu/.)

9:30 am – 10:30 am

EAAI-12 Invited Talk: **ml-class.org: Teaching Machine Learning to 100,000 Students**
Andrew Ng (Stanford University and Coursera)

6:00 – 7:00 pm

Opening Reception, Sheraton Centre Toronto Hotel

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Tuesday, July 24

8:15 am – 9:00 am

Welcome and Opening Remarks
Outstanding Award Presentations -- Papers, SPC Member, PC Member
Joerg Hoffmann and Bart Selman, AAAI-12 Program Cochairs

IAAI Welcome, Robert S. Engelmore Award, Deployed Application Award Announcements
Markus Fromherz, IAAI-12 Conference Chair, Hector Munoz-Avila, IAAI-12 Program Cochair, and David Leake, AI Magazine *Editor-in-Chief*

AAAI Classic Paper Award, Distinguished Service Award, Fellows Announcement, Senior Member Recognition
Eric Horvitz, AAAI Past President and Awards Committee Chair
Henry Kautz, AAAI President
Manuela Veloso, AAAI Incoming President

9:00 am – 10:00 am

AAAI Presidential Address: **Revisiting the Dream**
Henry Kautz, University of Rochester

10:20 am – 11:20 am (Tuesday, July 24)

ACM A. M. Turing Award Lecture: **The Mechanization of Causal Inference: A "Mini Turing Test" and Beyond**
Judea Pearl (University of California, Los Angeles)
This lecture is open to all conference participants and ACM members.

11:20 am – 12:00 pm

Knowledge Representation and Reasoning I

1084: Basing Decisions on Sentences in Decision Diagrams
Yexiang Xue, Arthur Choi, Adnan Darwiche

983: I'm Doing as Well as I Can: Modeling People as Rational Finite Automata
Joseph Y. Halpern, Rafael Pass, Lior Seeman

Natural Language Processing I

652: Collective Nominal Semantic Role Labeling for Tweets
Xiaohua Liu, Zhongyang Fu, Xiangyang Zhou, Furu Wei, Ming Zhou

678: Sembler: Ensembling Crowd Sequential Labeling for Improved Quality
Xian Wu, Wei Fan, Yong Yu

Machine Learning I

151: Learning the Kernel Matrix with Low-Rank Multiplicative Shaping
Tomer Levinboim, Fei Sha

167: Efficient Online Learning for Large-Scale Sparse Kernel Logistic Regression
Lijun Zhang, Rong Jin, Chun Chen, Jiajun Bu, Xiaofei He

Machine Learning II

790: Identifying Adverse Drug Events by Relational Learning
David Page, Vítor Santos Costa, Sriraam Natarajan, Aubrey Barnard, Peggy Peissig, Michael Caldwell

907: Heart Rate Topic Models
Alexander Van Esbroeck, Chih-Chun Chia, Zeeshan Syed

Multiagent Systems I

374: Modeling Context Aware Dynamic Trust Using Hidden Markov Model
Xin Liu, Anwitaman Datta

650: Probabilistic Alternating-Time Temporal Logic of Incomplete Information and Synchronous Perfect Recall
Xiaowei Huang, Kaile Su, Chenyi Zhang

1:25 pm – 2:25 pm

AAA-12 Invited Talk: **Duolingo: Translating the Web with Millions of People**
Luis von Ahn (Carnegie Mellon University)

2:25 pm – 4:15 pm

Knowledge Representation and Reasoning II

83: On the Relation of Constraint Answer Set Programming Languages and Algorithms
Yuliya Lierler

1010: Reformulating Temporal Action Logics in Answer Set Programming
Joohyung Lee, Ravi Palla

351: Ordered Completion for Logic Programs with Aggregates
Vernon Asuncion, Yan Zhang, Yi Zhou

**712: A Well-Founded Semantics for Basic Logic Programs with Arbitrary Abstract Constraint Atoms
Yisong Wang, Fangzhen Lin, Mingyi Zhang, Jia-Huai You

**365: FLP Semantics without Circular Justifications for General Logic Programs
Yi-Dong Shen, Kewen Wang

**809: Equality-Friendly Well-Founded Semantics and Applications to Description Logics
Georg Gottlob, André Hernich, Clemens Kupke, Thomas Lukasiewicz

**505: A Tractable First-Order Probabilistic Logic
Pedro Domingos, W. Austin Webb

**220: Using First-Order Logic to Compress Sentences
Minlie Huang, Xing Shi, Feng Jin, Xiaoyan Zhu

Computational Sustainability I

34: Patrol Strategies to Maximize Pristine Forest Area
Matthew P. Johnson, Fei Fang, Milind Tambe

48: Lagrangian Relaxation Techniques for Scalable Spatial Conservation Planning
Akshat Kumar, Xiaojian Wu, Shlomo Zilberstein

53: MOMDPs: A Solution for Modelling Adaptive Management Problems
Iadine Chadès, Josie Carwardine, Tara G. Martin, Samuel Nicol, Régis Sabbadin, Olivier Buffet

**12: The Automated Vacuum Waste Collection Optimization Problem
Ramón Béjar, Cèsar Fernández, Carles Mateu, Felip Manyà, Francina Sole-Mauri, David Vidal

**936: Last-Mile Restoration for Multiple Interdependent Infrastructures
Carleton Coffrin, Pascal Van Hentenryck, Russell Bent

**73: Sustaining Economic Exploitation of Complex Ecosystems in Computational Models of Coupled Human-Natural Networks
Neo D. Martinez, Perrine Tonin, Barbara Bauer, Rosalyn C. Rael, Rahul Singh, Sangyuk Yoon,

Ilmi Yoon, Jennifer A. Dunne

**62: An Efficient Simulation-Based Approach to Ambulance Fleet Allocation and Dynamic Redeployment
Yisong Yue, Lavanya Marla, Ramayya Krishnan

**54: Scheduling Conservation Designs via Network Cascade Optimization
Shan Xue, Alan Fern, Daniel Sheldon

Machine Learning III

579: Learning SVM Classifiers with Indefinite Kernels
Suicheng Gu, Yuhong Guo

763: Convex Kernelized Sorting
Nemanja Djuric, Mihajlo Grbovic, Slobodan Vucetic

595: Semi-Supervised Kernel Matching for Domain Adaptation
Min Xiao, Yuhong Guo

**86: Rule Ensemble Learning Using Hierarchical Kernels in Structured Output Spaces
Naveen Nair, Amrita Saha, Ganesh Ramakrishnan, Shonali Krishnaswamy

**1139: Investigating the Effectiveness of Laplacian-Based Kernels in Hub Reduction
Ikumi Suzuki, Kazuo Hara, Masashi Shimbo, Yuji Matsumoto, Marco Saerens

**355: Hierarchical Double Dirichlet Process Mixture of Gaussian Processes *Aditya Tayal, Pascal Poupart, Yuying Li*

Cognitive Systems I

8: Learning Qualitative Models by Demonstration
Thomas R. Hinrichs, Kenneth D. Forbus

47: A Grounded Cognitive Model for Metaphor Acquisition
Sushobhan Nayak, Amitabha Mukerjee

336: Three Controversial Hypotheses Concerning Computation in the Primate Cortex
Thomas Dean, Greg S. Corrado, Jonathon Shlens

**15: Sentic Activation: A Two-Level Affective Common Sense Reasoning Framework
Erik Cambria, Daniel Olsher, Kenneth Kwok

**35: Using Expectations to Drive Cognitive Behavior
Unmesh Kurup, Christian Lebiere, Anthony Stentz, Martial Hebert

**43: Social Cognition: Memory Decay and Adaptive Information Filtering for Robust Information Maintenance
David Reitter, Christian Lebiere

Multiagent Systems II

973: Alpha-Beta Pruning for Games with Simultaneous Moves
Abdallah Saffidine, Hilmar Finnsson, Michael Buro

608: HyperPlay: A Solution to General Game Playing with Imperfect Information
Michael Schofield, Timothy Cerexhe, Michael Thielscher

1040: Solving Dots-And-Boxes
Joseph K. Barker, Richard E. Korf

**939: Generalized Monte-Carlo Tree Search Extensions for General Game Playing
Hilmar Finnsson

**1101: Information Set Generation in Partially Observable Games
Mark Richards, Eyal Amir

**902: Construction of New Medicines via Game Proof Search
Abraham Heifets, Igor Jurisica

Spotlights Track: Multiagent Systems

What's Hot: Computing Game-Theoretic Solutions and Applications to Security
Vincent Conitzer

Best Paper: PROTECT: An Application of Computational Game Theory for the Security of the Ports of the United States (Best Paper Shortlist AAMAS'12)
Eric Shieh, Bo An, Rong Yang, Milind Tambe, Craig Baldwin, Joseph DiRenzo, Ben Maule, Garrett Meyer

Best Paper: Optimal Manipulation of Voting Rules (Best Paper Shortlist AAMAS'12)
Svetlana Obraztsova, Edith Elkind

Best Paper: Predicting Your Own Effort (Best Paper Shortlist AAMAS'12)
David F. Bacon, Yiling Chen, Ian Kash, David C. Parkes, Malvika Rao, Manu Sridharan

Challenges: Delivering the Smart Grid: Challenges for Autonomous Agents and Multi-Agent Systems Research
Alex Rogers, S. D. Ramchurn, N. R. Jennings

4:30 pm – 6:20 pm

Knowledge Representation and Reasoning III

720: The Parameterized Complexity of Abduction
Michael R. Fellows, Andreas Pfandler, Frances A. Rosamond, Stefan Rümmele

240: A First-Order Interpreter for Knowledge-Based Golog with Sensing Based on Exact Progression and Limited Reasoning
Yi Fan, Minghui Cai, Naiqi Li, Yongmei Liu

780: On the Complexity of Consistent Query Answering in the Presence of Simple Ontologies
Meghyn Bienvenu

**721: Query Rewriting for Horn-*SHIQ* plus Rules
Thomas Eiter, Magdalena Ortiz, Mantas Simkus, Trung-Kien Tran, Guohui Xiao

**649: Benchmarking Ontology-Based Query Rewriting Systems
Martha Imprialou, Giorgos Stoilos, Bernardo Cuenca Grau

**203: Ontology-Based Data Access with Dynamic TBoxes in DL-Lite
Floriana Di Pinto, Giuseppe De Giacomo, Maurizio Lenzerini, Riccardo Rosati

**852: On Completeness Classes for Query Evaluation on Linked Data
Andreas Harth, Sebastian Speiser

**548: Exploring the Duality in Conflict-Directed Model-Based Diagnosis
Roni Stern, Meir Kalech, Alexander Feldman, Gregory Provan

Computational Sustainability II

23: Non-Intrusive Load Monitoring Using Prior Models of General Appliance Types
Oliver Parson, Siddhartha Ghosh, Mark Weal, Alex Rogers

64: Fine-Grained Photovoltaic Output Prediction Using a Bayesian Ensemble
Prithwish Chakraborty, Manish Marwah, Martin Arlitt, Naren Ramakrishnan

28: Far Out: Predicting Long-Term Human Mobility
Adam Sadilek, John Krumm

**39: An Intelligent Battery Controller Using Bias-Corrected *Q*-learning
Donghun Lee, Warren B. Powell

**71: Improving Hybrid Vehicle Fuel Efficiency Using Inverse Reinforcement Learning
Adam Vogel, Deepak Ramachandran, Rakesh Gupta, Antoine Raux

**46: Cooperative Virtual Power Plant Formation Using Scoring Rules
Valentin Robu, Ramachandra Kota, Georgios Chalkiadakis, Alex Rogers, Nicholas R. Jennings

**69: Factored Models for Multiscale Decision-Making in Smart Grid Customers
Prashant P. Reddy, Manuela M. Veloso

**833: Cruising with a Battery-Powered Vehicle and Not Getting Stranded
Sabine Storandt, Stefan Funke

Machine Learning IV

748: Discriminative Clustering via Generative Feature Mapping
Liwei Wang, Xiong Li, Zhuowen Tu, Jiaya Jia

230: Convex Matching Pursuit for Large-Scale Sparse Coding and Subset Selection
Mingkui Tan, Ivor W. Tsang, Li Wang, Xinming Zhang

168: Sparse Probabilistic Relational Projection
Wu-Jun Li, Dit-Yan Yeung

**499: Weighted Clustering
Margareta Ackerman, Shai Ben-David, Simina Brânzei, David Loker

**816: Pairwise Exemplar Clustering
Yingzhen Yang, Xinqi Chu, Feng Liang, Thomas S. Huang

**718: Sparse Principal Component Analysis with Constraints
Mihajlo Grbovic, Christopher R. Dance, Slobodan Vucetic

**946: Low-Rank Matrix Recovery via Efficient Schatten p-Norm Minimization
Feiping Nie, Heng Huang, Chris Ding

**84: Transportability of Causal Effects: Completeness Results
Elias Bareinboim, Judea Pearl

Cognitive Systems II

16: A Multi-Domain Evaluation of Scaling in a General Episodic Memory
Nate Derbinsky, Justin Li, John E. Laird

28: Towards a Cognitive System that Can Recognize Spatial Regions Based on Context
Nick Hawes, Matthew Klenk, Kate Lockwood, Graham S. Horn, John D. Kelleher

48: Crossing Boundaries: Multi-Level Introspection in a Complex Robotic Architecture for Automatic Performance Improvements
Evan Krause, Paul Schermerhorn, Matthias Scheutz

**26: Lessons Learned from a Rational Reconstruction of Minstrel
Brandon Tearse, Peter Mawhorter, Michael Mateas, Noah Wardrip-Fruin

**41: Functional Interactions between Memory and Recognition Judgments
Justin Li, Nate Derbinsky, John Laird

**57: Discovering Constraints for Inductive Process Modeling
Ljupco Todorovski, Will Bridewell, Pat Langley

Multiagent Systems III

954: Influence-Based Abstraction for Multiagent Systems
Frans A. Oliehoek, Stefan J. Witwicki, Leslie P. Kaelbling

78: Catch Me If You Can: Pursuit and Capture in Polygonal Environments with Obstacles
Kyle Klein, Subhash Suri

632: Decision Support for Agent Populations in Uncertain and Congested Environments
Pradeep Varakantham, Shih-Fen Cheng, Geoff Gordon, Asrar Ahmed

**958: Tree-Based Solution Methods for Multiagent POMDPs with Delayed Communication
Frans A. Oliehoek, Matthijs T.J. Spaan

**531: Bayes-Adaptive Interactive POMDPs
Brenda Ng, Kofi Boakye, Carol Meyers, Andrew Wang

**524: A Hybrid Algorithm for Coalition Structure Generation
Talal Rahwan, Tomasz Michalak, Nicholas R. Jennings

**788: A Distributed Approach to Summarizing Spaces of Multiagent Schedules
James C. Boerkoel Jr., Edmund H. Durfee

Spotlights Track: Games

What's Hot: What's Hot in Games from the AIIDE Perspective
Mark Riedl, Vadim Bulitko

Best Paper: Goal Recognition with Markov Logic Networks for Player-Adaptive Games (Best Paper AIIDE-11)
Eun Y. Ha, Jonathan P. Rowe, Bradford W. Mott, James C. Lester

5:30 pm – 7:30 pm

AAAI-12 Poster Reception
Student Abstracts, Doctoral Consortium, EAAI, and Poker Competition

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Wednesday, July 25

9:00 am – 10:00 am

AAAI Turing Lecture: **The Origin of Computable Numbers: A Tale of Two Classics**
Christos H. Papadimitriou (University of California, Berkeley)

10:20 am – 12:10 pm

MDPs, Planning, & Sequential Decision Making I

871: LRTDP Versus UCT for Online Probabilistic Planning
Andrey Kolobov, Mausam, Daniel S. Weld

561: Action Selection for MDPs: Anytime AO* Versus UCT
Blai Bonet, Hector Geffner

912: Stochastic Safest and Shortest Path Problems
Florent Teichteil-Königsbuch

**1194: Approximate Policy Iteration with Linear Action Models
Hengshuai Yao, Csaba Szepesvári

**196: Covering Number as a Complexity Measure for POMDP Planning and Learning
Zongzhang Zhang, Michael Littman, Xiaoping Chen

**1006: Efficient Approximate Value Iteration for Continuous Gaussian POMDPs
Jur van den Berg, Sachin Patil, Ron Alterovitz

**POMDPs Make Better Hackers: Accounting for Uncertainty in Penetration Testing
Carlos Sarraute, Olivier Buffet, Jörg Hoffmann

Natural Language Processing II

640: Document Summarization Based on Data Reconstruction
Zhanying He, Chun Chen, Jiajun Bu, Can Wang, Lijun Zhang, Deng Cai, Xiaofei He

138: Generating Coherent Summaries with Textual Aspects
Renxian Zhang, Wenjie Li, Dehong Gao

1170: Sense Sentiment Similarity: An Analysis
Mitra Mohtarami, Hadi Amiri, Man Lan, Thanh Phu Tran, Chew Lim Tan

**345: Opinion Target Extraction Using a Shallow Semantic Parsing Framework
Shoushan Li, Rongyang Wang, Guodong Zhou

**1070: Modeling Textual Cohesion for Event Extraction
Ruihong Huang, Ellen Riloff

**431: Similarity Is *Not* Entailment-Jointly Learning Similarity Transformations for Textual Entailment
Ken-ichi Yokote, Danushka Bollegala, Mitsuru Ishizuka

Machine Learning V

397: Multi-Label Learning by Exploiting Label Correlations Locally
Sheng-Jun Huang, Zhi-Hua Zhou

1146: Multi-Label Learning on Tensor Product Graph
Jonathan Q. Jiang

970: Compressed Least-Squares Regression on Sparse Spaces
Mahdi Milani Fard, Yuri Grinberg, Joelle Pineau, Doina Precup

**774: Towards Discovering What Patterns Trigger What Labels
Yu-Feng Li, Ju-Hua Hu, Yuan Jiang, Zhi-Hua Zhou

**687: Classification of Sparse Time Series via Supervised Matrix Factorization
Josif Grabocka, Alexandros Nanopoulos, Lars Schmidt-Thieme

**998: Table Header Detection and Classification
Jing Fang, Prasenjit Mitra, Zhi Tang, C. Lee Giles

**473: Sequence Labeling with Non-Negative Weighted Higher Order Features
Xian Qian, Yang Liu

**723: Hierarchical Modeling with Tensor Inputs
Yada Zhu, Jingrui He, Rick Lawrence

AI and the Web I

67: Fused Matrix Factorization with Geographical and Social Influence in Location-Based Social Networks
Chen Cheng, Haiqin Yang, Irwin King, Michael R. Lyu

30: Social Context-Aware Trust Network Discovery in Complex Contextual Social Networks
Guanfeng Liu, Yan Wang, Mehmet A. Orgun

57: Discovering Spammers in Social Networks
Yin Zhu, Xiao Wang, Erheng Zhong, Nanthan N. Liu, He Li, Qiang Yang

**28: Multinomial Relation Prediction in Social Data: A Dimension Reduction Approach
Nozomi Nori, Danushka Bollegala, Hisashi Kashima

**118: Combining Hashing and Abstraction in Sparse High Dimensional Feature Spaces

Cornelia Caragea, Adrian Silvescu, Prasenjit Mitra

**4: Towards Automated Choreographing of Web Services Using Planning
Guobing Zou, Yixin Chen, You Xu, Ruoyun Huang, Yang Xiang

Multiagent Systems IV

741: Identifying Bullies with a Computer Game
Juan F. Mancilla-Caceres, Wen Pu, Eyal Amir, Dorothy Espelage

310: Strategic Advice Provision in Repeated Human-Agent Interactions
Amos Azaria, Zinovi Rabinovich, Sarit Kraus, Claudia V. Goldman, Ya'akov Gal

676: Negotiation in Exploration-Based Environment
Israel Sofer, David Sarne, Avinatan Hassidim

**244: Characterizing Multi-Agent Team Behavior from Partial Team Tracings: Evidence from the English Premier League
Patrick Lucey, Alina Bialkowski, Peter Carr, Eric Foote, Iain Matthews

**504: Agent-Human Coordination with Communication Costs under Uncertainty
Asaf Frieder, Raz Lin, Sarit Kraus

Spotlights Track: SAT + CP

SAT:

What's Hot: SMT-Based Verification of Hybrid Systems
Alessandro Cimatti, Sergio Mover, Stefano Tonetta

Best Paper: On Freezing and Reactivating Learnt Clauses (SAT'11 Best Paper Award)
Gilles Audemard, Jean-Marie Lagniez, Bertrand Mazure, Lakhdar Sais

Challenges: Seven Challenges in Parallel SAT Solving
Youssef Hamadi, Christoph M. Wintersteiger

Constraint Programming:

What's Hot: Symmetry Breaking Constraints: Recent Results
Toby Walsh

Best Paper: Systematically Identifying and Exploiting Dominance Relations (Best Paper CP-12)
Geoffrey Chu and Peter Stuckey

Challenges: Opportunities and Challenges for Constraint Programming
Barry O'Sullivan

10:20 – 11:20 am

***IAAI-12 Invited Talk:* Robert S. Engelmore Memorial Award Lecture**
Building AI: Our Shared Enterprise
Steven Minton (President, InferLink Corporation)

1:25 pm – 2:25 pm

AAAI-12 Invited Talk: **Automating Biology Using Robot Scientists**
Ross D. King (University of Manchester, UK)

2:25 pm – 4:15 pm

MDPs, Planning, & Sequential Decision Making II

849: Planning in Factored Action Spaces with Symbolic Dynamic Programming
Aswin Raghavan, Saket Joshi, Alan Fern, Prasad Tadepalli, Roni Khardon

424: Symbolic Dynamic Programming for Continuous State and Action MDPs
Zahra Zamani, Scott Sanner, Cheng Fang

107: Time-Consistency of Optimization Problems
Takayuki Osogami, Tetsuro Morimura

**464: Investigating Contingency Awareness Using Atari 2600 Games
Marc G. Bellemare, Joel Veness, Michael Bowling

**483: Sample Bounded Distributed Reinforcement Learning for Decentralized POMDPs
Bikramjit Banerjee, Jeremy Lyle, Landon Kraemer, Rajesh Yellamraju

**992: Adaptive Step-Size for Online Temporal Difference Learning
William Dabney, Andrew G. Barto

**845: Sequential Decision Making with Rank Dependent Utility: A Minimax Regret Approach
Gildas Jeantet, Patrice Perny, Olivier Spanjaard

Natural Language Processing III

76: Generating Chinese Classical Poems with Statistical Machine Translation Models
Jing He, Ming Zhou, Long Jiang

247: Generating Pictorial Storylines via Minimum-Weight Connected Dominating Set Approximation in Multi-View Graphs
Dingding Wang, Tao Li, Mitsunori Ogihara

886: Choosing Linguistics over Vision to Describe Images
Ankush Gupta, Yashaswi Verma, C. V. Jawahar

**421: Concept-Based Approach to Word-Sense Disambiguation
Ariel Raviv, Shaul Markovitch

**379: Emoticon Smoothed Language Models for Twitter Sentiment Analysis
Kun-Lin Liu, Wu-Jun Li, Minyi Guo

**663: Exacting Social Events for Tweets Using a Factor Graph
Xiaohua Liu, Xiangyang Zhou, Zhongyang Fu, Furu Wei, Ming Zhou

Machine Learning VI

369: Efficient Multi-Stage Conjugate Gradient for Trust Region Step

Pinghua Gong, Changshui Zhang

1097: Name-Ethnicity Classification and Ethnicity-Sensitive Name Matching
Pucktada Treeratpituk, C. Lee Giles

523: Dynamic Matching via Weighted Myopia with Application to Kidney Exchange
John P. Dickerson, Ariel D. Procaccia, Tuomas Sandholm

**443: Margin-Based Feature Selection in Incomplete Data
Qiang Lou, Zoran Obradovic

**439: Ensemble Feature Weighting Based on Local Learning and Diversity
Yun Li, Suyan Gao, Songcan Chen

**212: Unsupervised Feature Selection Using Nonnegative Spectral Analysis
Zechao Li, Yi Yang, Jing Liu, Xiaofang Zhou, Hanqing Lu

AI and the Web II

24: Online Task Assignment in Crowdsourcing Markets
Chien-Ju Ho, Jennifer Wortman Vaughan

51: Quality Expectation-Variance Tradeoffs in Crowdsourcing Contests
Xi Alice Gao, Yoram Bachrach, Peter Key, Thore Graepel

115: Dynamically Switching between Synergistic Workflows for Crowdsourcing
Christopher H. Lin, Mausam, Daniel S. Weld

**31: A Convex Formulation for Learning from Crowds
Hiroshi Kajino, Yuta Tsuboi, Hisashi Kashima

**72: REWOrD: Semantic Relatedness in the Web of Data
Giuseppe Pirró

**82: Improved Convergence of Iterative Ontology Alignment Using Block-Coordinate Descent
Uthayasanker Thayasivam, Prashant Doshi

**527: Towards Population Scale Activity Recognition: A Framework for Handling Data Diversity
Saeed Abdullah, Nicholas D. Lane, Tanzeem Choudhury

Multiagent Systems V

258: Symmetric Subgame Perfect Equilibria in Resource Allocation
Ludek Cigler, Boi Faltings

737: Computing Equilibria in Two-Player Zero-Sum Continuous Stochastic Games with Switching Controller
Guido Bonomi, Nicola Gatti, Fabio Panozzo, Marcello Restelli

413: Computing the Nucleolus of Matching, Cover and Clique Games
Ning Chen, Pinyan Lu, Hongyang Zhang

**994: Computing Optimal Strategies to Commit to in Stochastic Games
Joshua Letchford, Liam MacDermed, Vincent Conitzer, Ronald Parr, Charles L. Isbell

**490: Computing Stackelberg Equilibria in Discounted Stochastic Games
Yevgeniy Vorobeychik, Satinder Singh

**648: Stability via Convexity and LP Duality in OCF Games
Yair Zick, Evangelos Markakis, Edith Elkind

**296: Possible Winners in Noisy Elections
Krzysztof Wojtas, Piotr Faliszewski

Spotlights Track: Search + Planning

Search:

What's Hot: Heuristic Search Comes of Age
Nathan Sturtevant, Ariel Felner, Maxim Likhachev, Wheeler Ruml

Best Paper: New Approaches for Optimally Solving the Multi-Agent Path Finding Problem (Best Paper SOCS'12)
Guni Sharon, Roni Stern, Ariel Felner, Nathan Sturtevant

Challenges: Research Challenges in Combinatorial Search
Rich Korf

Planning:

Best Paper: Semi-Relaxed Plan Heuristics (Best Paper ICAPS'12)
Emil Keyder, Jörg Hoffmann, Patrik Haslum

What's Hot: Standing on the Shoulders of Classical Planners
Ronen Brafman

Best Paper: Compiling Uncertainty Away in Conformant Planning Problems with Bounded Width (JAIR Best Paper Prize 2012)
Hector Palacios, Hector Geffner

Challenges: Planning as an Iterative Process
David E. Smith

2:25 pm – 4:15 pm
AAAI Turing Event
Screening of TV Debate between Foucault and Chomksy
Conference Room D/E, Second Floor

4:30 pm – 6:20 pm

MDPs, Planning, & Sequential Decision Making III

925: TD-$\Delta\pi$: A Model-Free Algorithm for Efficient Exploration
Bruno Castro da Silva, Andrew G. Barto

830: Conservative and Greedy Approaches to Classification-Based Policy Iteration
Mohammad Ghavamzadeh, Alessandro Lazaric

318: Competing with Humans at Fantasy Football: Team Formation in Large Partially-Observable Domains
Tim Matthews, Sarvapali D. Ramchurn, Georgios Chalkiadakis

**208: Knapsack Based Optimal Policies for Budget-Limited Multi-Armed Bandits
Long Tran-Thanh, Archie Chapman, Alex Rogers, Nicholas R. Jennings

**275: Context Tree Maximizing Reinforcement Learning
Phuong Nguyen, Peter Sunehag, Marcus Hutter

**214: Kernel-Based Reinforcement Learning on Representative States
Branislav Kveton, Georgios Theocharous

**198: MCTS Based on Simple Regret
David Tolpin, Solomon Eyal Shimony

Constraints, SAT, & Search I

88: A Dichotomy for 2-Constraint Forbidden CSP Patterns
Martin C. Cooper, Guillaume Escamocher

709: Solving Temporal Problems Using SMT: Weak Controllability
A. Cimatti, A. Micheli, M. Roveri

919: Optimization and Controlled Systems: A Case Study on Thermal Aware Workload Dispatching
Andrea Bartolini, Michele Lombardi, Michela Milano, Luca Benini

**795: An Efficient Higher-Order Consistency Algorithm for Table Constraints
Anastasia Paparrizou, Kostas Stergiou

**580: Polynomially Decomposable Global Cost Functions in Weighted Constraint Satisfaction
J. H. M. Lee, K. L. Leung, Y. Wu

**294: DUCT: An Upper Confidence Bound Approach to Distributed Constraint Optimization Problems
Brammert Ottens, Christos Dimitrakakis, Boi Faltings

**1104: Incremental Management of Oversubscribed Vehicle Schedules in Dynamic Dial-A-Ride Problems
Zachary B. Rubinstein, Stephen F. Smith, Laura Barbulescu

**630: Filtering Decomposable Global Cost Functions
D. Allouche, C. Bessiere, P. Boizumault, S. de Givry, P. Gutierrez, S. Loudni, JP. Métivier, T. Schiex

**828: Filtering Algorithms Based on the Word-RAM Model
Philippe Van Kessel, Claude-Guy Quimper

Machine Learning VII

1171: Clustering Documents along Multiple Dimensions
Sajib Dasgupta, Richard M. Golden, Vincent Ng

688: Topic Correlation Analysis for Cross-Domain Text Classification

Lianghao Li, Xiaoming Jin, Mingsheng Long

35: Query-Oriented Multi-Document Summarization via Unsupervised Deep Learning
Yan Liu, Sheng-hua Zhong, Wenjie Li

**498: A Spin-Glass Model for Semi-Supervised Community Detection
Eric Eaton, Rachael Mansbach

**1076: Simple Robust Grammar Induction with Combinatory Categorial Grammars
Yonatan Bisk, Julia Hockenmaier

**1113: Learning Games from Videos Guided by Descriptive Complexity
Lukasz Kaiser

**67: Colorization by Matrix Completion
Shusen Wang, Zhihua Zhang

**139: Unsupervised Detection of Music Boundaries by Time Series Structure Features
Joan Serrà, Meinard Müller, Peter Grosche, Josep Ll. Arcos

AI and the Web III

37: A Data-Driven Approach to Question Subjectivity Identification in Community Question Answering
Tom Chao Zhou, Xiance Si, Edward Y. Chang, Irwin King, Michael R. Lyu

59: ET-LDA: Joint Topic Modeling for Aligning Events and Their Twitter Feedback
Yuheng Hu, Ajita John, Fei Wang, Subbarao Kambhampati

97: Predicting Disease Transmission from Geo-Tagged Micro-Blog Data
Adam Sadilek, Henry Kautz, Vincent Silenzio

**108: Querying Linked Ontological Data through Distributed Summarization
Achille Fokoue, Felipe Meneguzzi, Murat Sensoy, Jeff Z. Pan

**105: Fine-Grained Entity Recognition
Xiao Ling, Daniel S. Weld

**53: Building Contextual Anchor Text Representation Using Graph Regularization
Na Dai

**87: Adaptive Polling for Information Aggregation
Thomas Pfeiffer, Xi Alice Gao, Andrew Mao, Yiling Chen, David G. Rand

Multiagent Systems VI

194: Congestion Games with Agent Failures
Reshef Meir, Moshe Tennenholtz, Yoram Bachrach, Peter Key

915: The Deployment-to-Saturation Ratio in Security Games
Manish Jain, Kevin Leyton-Brown, Milind Tambe

1020: Finding Optimal Abstract Strategies in Extensive-Form Games
Michael Johanson, Nolan Bard, Neil Burch, Michael Bowling

**202: Generalized Sampling and Variance in Counterfactual Regret Minimization
Richard Gibson, Marc Lanctot, Neil Burch, Duane Szafron, Michael Bowling

**385: Security Games for Controlling Contagion
Jason Tsai, Thanh H. Nguyen, Milind Tambe

**328: Security Games with Limited Surveillance
Bo An, David Kempe, Christopher Kiekintveld, Eric Shieh, Satinder Singh, Milind Tambe, Yevgeniy Vorobeychik

**266: Using Sliding Windows to Generate Action Abstractions in Extensive-Form Games
John Hawkin, Robert C. Holte, Duane Szafron

Spotlights Track: Machine Learning

What's Hot: Recent Advances in Polyphonic Music Generation and Transcription
Nicolas Boulanger-Lewandowski

Best Paper: On the Partition Function and Random Maximum A-Posteriori Perturbations (Best Paper Shortlist ICML'12)
Tamir Hazan, Tommi Jaakkola

Best Paper: Bayesian Posterior Sampling via Stochastic Gradient Fisher Scoring (Best Paper Shortlist ICML'12)
Sungjin Ahn, Anoop Korattikara, Max Welling

Best Paper: A Production Rule-based Framework for Causal and Epistemic Reasoning (Best Paper RuleML'12)
Theodore Patkos, Abdelghani Chibani, Dimitris Plexousakis, Yacine Amirat

Challenges: Challenges for Machine Learning Impact on the Real World
Kiri Wagstaff

6:30 pm – 7:30 pm
AAAI Turing Event: Performance of "Hello Hi There"
Concept and Direction by Annie Dorsen
Grand Ballroom E, Lower Concourse
(see also TV debate Wednesday, 2:25 – 4:15 and Q&A Thursday, 11:20 – 12:10)

8:00 pm – 11:00 pm
AAAI-12 Banquet, CN Tower
(Reservation required)

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Thursday, July 26

9:00 am – 10:00 am

***AAAI-12 Invited Talk:* Learning to Behave by Reading**
Regina Barzilay (Massachusetts Institute of Technology)

10:20 am – 12:10 pm

MDPs, Planning, & Sequential Decision Making IV

683: Improving Hierarchical Planning Performance by the Use of Landmarks
Mohamed Elkawkagy, Pascal Bercher, Bernd Schattenberg, Susanne Biundo

564: Width and Complexity of Belief Tracking in Non-Deterministic Conformant and Contingent Planning
Blai Bonet, Hector Geffner

183: A Multi-Path Compilation Approach to Contingent Planning
Ronen I. Brafman, Guy Shani

**418: The Complexity of Planning Revisited-A Parameterized Analysis
Christer Bäckström, Yue Chen, Peter Jonsson, Sebastian Ordyniak, Stefan Szeider

**204: Structural Patterns beyond Forks: Extending the Complexity Boundaries of Classical Planning
Michael Katz, Emil Keyder

**319: MAXSAT Heuristics for Cost Optimal Planning
Lei Zhang, Fahiem Bacchus

**60: Evaluating Temporal Plans in Incomplete Domains
Daniel Morwood, Daniel Bryce

Computational Sustainability III

57: Global Climate Model Tracking Using Geospatial Neighborhoods
Scott McQuade, Claire Monteleoni

40: Coupling Spatiotemporal Disease Modeling with Diagnosis
Martin Mubangizi, Catherine Ikae, Athina Spiliopoulou, John A. Quinn

56: A Novel and Scalable Spatio-Temporal Technique for Ocean Eddy Monitoring
James H. Faghmous, Yashu Chamber, Shyam Boriah, Stefan Liess, Vipin Kumar, Frode Vikebø, Michel dos Sontos Mesquita

**4: Prediction and Fault Detection of Environmental Signals with Uncharacterised Faults
Michael A. Osborne, Roman Garnett, Kevin Swersky, Nando de Freitas

**13: Sensing the Air We Breathe - The OpenSense Zurich Dataset
Jason Jingshi Li, Boi Faltings, Olga Saukh, David Hasenfratz, Jan Beutel

**22: Learning Non-Stationary Space-Time Models for Environmental Monitoring
Sahil Garg, Amarjeet Singh, Fabio Ramos

**38: Pre-Symptomatic Prediction of Plant Drought Stress Using Dirichlet-Aggregation Regression on Hyperspectral Images
Kristian Kersting, Zhao Xu, Mirwaes Wahabzada, Christian Bauckhage, Christian Thurau, Christoph Roemer, Agim Ballvora, Uwe Rascher, Jens Leon, Lutz Pluemer

**45: Robust Cuts Over Time: Combatting the Spread of Invasive Species with Unreliable Biological Control

Gwen Spencer

Machine Learning VIII

458: Online Kernel Selection: Algorithms and Evaluations
Tianbao Yang, Mehrdad Mahdvi, Rong Jin, Jinfeng Yi, Steven C. H. Hoi

644: Improving Twitter Retrieval by Exploiting Structural Information
Zhunchen Luo, Miles Osborne, Sasa Petrovic, Ting Wang

1189: Learning to Learn: Algorithmic Inspirations from Human Problem Solving
Ashish Kapoor, Bongshin Lee, Desney Tan, Eric Horvitz

**10: Transfer Learning with Graph Co-Regularization
Mingsheng Long, Jianmin Wang, Guiguang Ding, Dou Shen, Qiang Yang

**628: Transfer Learning in Collaborative Filtering with Uncertain Ratings
Weike Pan, Evan W. Xiang, Qiang Yang

**216: Modeling the Evolution of Knowledge in Learning Systems
Abhishek Sharma, Kenneth D. Forbus

**635: Manifold Warping: Manifold Alignment over Time
Hoa T. Vu, CJ Carey, Sridhar Mahadevan

**192: A Bregman Divergence Optimization Framework for Ranking on Data Manifold and Its New Extensions
Bin Xu, Jiajun Bu, Chun Chen, Deng Cai

Robotics I

54: Using the Web to Interactively Learn to Find Objects
Mehdi Samadi, Thomas Kollar, Manuela Veloso

59: Improving Request Compliance through Robot Affect
Lilia Moshkina

64: Model Learning and Real-Time Tracking Using Multi-Resolution Surfel Maps
Jörg Stückler, Sven Behnke

**19: Parsing Outdoor Scenes from Streamed 3D Laser Data Using Online Clustering and Incremental Belief Updates
Rudolph Triebel, Rohan Paul, Daniela Rus, Paul Newman

**31: Visibility Induction for Discretized Pursuit-Evasion Games
Ahmed Abdelkader, Hazem El-Alfy

**35: Visual Saliency Estimation through Manifold Learning
Richard M. Jiang, Danny Crookes

**949: Mirror Perspective-Taking with a Humanoid Robot
Justin W. Hart, Brian Scassellati

**7: Repeated Sequential Auctions with Dynamic Task Clusters
Bradford Heap, Maurice Pagnucco

**99: Visual Saliency Map from Tensor Analysis
Bing Li, Weihua Xiong, Weiming Hu

Multiagent Systems VII

388: Automated Strategies for Determining Rewards for Human Work
Amos Azaria, Yonatan Aumann, Sarit Kraus

672: A Robust Bayesian Truth Serum for Small Populations
Jens Witkowski, David C. Parkes

626: A Scalable Message-Passing Algorithm for Supply Chain Formation
Toni Penya-Alba, Jesus Cerquides, Juan A. Rodriguez-Aguilar, Meritxell Vinyals

**1105: Fairness and Welfare through Redistribution When Utility Is Transferable
Ruggiero Cavallo

**854: Optimizing Payments in Dominant-Strategy Mechanisms for Multi-Parameter Domains
Lachlan Dufton, Victor Naroditskiy, Maria Polukarov, Nicholas R. Jennings

**530: Optimal Auctions for Spiteful Bidders
Pingzhong Tang, Tuomas Sandholm

**1017: Approximately Revenue-Maximizing Auctions for Deliberative Agents
L. Elisa Celis, Anna R. Karlin, Kevin Leyton-Brown, C. Thach Nguyen, David R. M. Thompson

**58: Housing Markets with Indifferences: A Tale of Two Mechanisms
Haris Aziz, Bart de Keijzer

Spotlights Track: Knowledge Representation & Reasoning and Semantic Web

Knowledge Representation and Reasoning:

What's Hot: What's Hot in Knowledge Representation and Reasoning
Sheila McIlraith

Best Paper: Optimal Value of Information in Graphical Models (JAIR Best Paper Prize runner-up 2012)
Carlos Guestrin, Andreas Krause

Best Paper: Ambiguous Language and Differences in Beliefs (KR'12 Ray Reiter Best Paper Prize)
Joseph Halpern, Willemien Kets

Semantic Web:

What's Hot: What's Hot and What's Not in the Semantic Web
Chris Welty

Best Paper: Usage-Centric Benchmarking of RDF Triple Stores (Best Research Paper ISWC'11)
Mohamed Morsey, Jens Lehmann, Sören Auer, Axel-Cyrille Ngonga Ngomo

10:20 – 11:20 am

IAAI-12 Invited Talk: **Recent Progress on Self-Driving Cars**
Sebastian Thrun (Stanford University/Google)

11:20 am – 12:10 pm
AAAI Turing Event: "Hello Hi There"
Question and Answer Session with Annie Dorsen
Kenora, Second Floor

1:25 pm – 2:25 pm

AAAI-12 Invited Talk: **How to Grow a Mind: Statistics, Structure and Abstraction**
Joshua B. Tenenbaum (Massachusetts Institute of Technology)

2:25 pm – 4:15 pm

Knowledge Representation and Reasoning IV

714: Symbolic Synthesis of Observability Requirements for Diagnosability
Benjamin Bittner, Marco Bozzano, Alessandro Cimatti, Xavier Olive

1059: Synthesizing Strategies for Epistemic Goals by Epistemic Model Checking: An Application to Pursuit Evasion Games
Xiaowei Huang, Ron van der Meyden

859: Automatically Generating Algebra Problems
Rohit Singh, Sumit Gulwani, Sriram Rajamani

**371: Belief Functions on Distributive Lattices
Chunlai Zhou

**613: Conflict-Based Belief Revision Operators in Possibilistic Logic
Guilin Qi, Kewen Wang

**171: Approximating the Sum Operation for Marginal-MAP Inference
Qiang Cheng, Feng Chen, Jianwu Dong, Wenli Xu, Alexander Ihler

**375: On Finding Optimal Polytrees
Serge Gaspers, Mikko Koivisto, Mathieu Liedloff, Sebastian Ordyniak, Stefan Szeider

Constraints, SAT, & Search II

227: Partial-Expansion A* with Selective Node Generation
Ariel Felner, Meir Goldenberg, Guni Sharon, Roni Stern, Tal Beja, Nathan Sturtevant, Jonathan Schaeffer, Robert C. Holte

66: Fast and Accurate Predictions of IDA*'s Performance
Levi H. S. Lelis, Sandra Zilles, Robert C. Holte

1043: Solving Peg Solitaire with Bidirectional BFIDA*
Joseph K. Barker, Richard E. Korf

**134: The Linear Distance Traveling Tournament Problem
Richard Hoshino, Ken-ichi Kawarabayashi

**155: Random Projection with Filtering for Nearly Duplicate Search
Yue Lin, Rong Jin, Deng Cai, Xiaofei He

**177: A Parameterized Runtime Analysis of Evolutionary Algorithms for the Euclidean Traveling Salesperson Problem
Andrew M. Sutton, Frank Neumann

**315: Double-Bit Quantization for Hashing
Weihao Kong, Wu-Jun Li

**588: Iterative Resource Allocation for Memory Intensive Parallel Search Algorithms on Clouds, Grids, and Shared Clusters
Alex Fukunaga, Akihiro Kishimoto, Adi Botea

**316: Conflict-Based Search for Optimal Multi-Agent Path Finding
Guni Sharon, Roni Stern, Ariel Felner, Nathan Sturtevant

Machine Learning IX

210: Learning from Demonstration for Goal-Driven Autonomy
Ben G. Weber, Michael Mateas, Arnav Jhala

837: Algorithmic and Human Teaching of Sequential Decision Tasks
Maya Cakmak, Manuel Lopes

659: Teaching Machines to Learn by Metaphors
Omer Levy, Shaul Markovitch

**583: A Sequential Decision Approach to Ordinal Preferences in Recommender Systems
Truyen Tran, Dinh Q. Phung, Svetha Venkatesh

**980: Counting-MLNs: Learning Relational Structure for Decision Making
Aniruddh Nath, Matthew Richardson

**742: Markov Network Structure Learning: A Randomized Feature Generation Approach
Jan Van Haaren, Jesse Davis

**320: Performance and Preferences: Interactive Refinement of Machine Learning Procedures
Ashish Kapoor, Bongshin Lee, Desney Tan, Eric Horvitz

AI and the Web IV

50: Music-Inspired Texture Representation
Ben Horsburgh, Susan Craw, Stewart Massie

88: BabelRelate! A Joint Multilingual Approach to Computing Semantic Relatedness
Roberto Navigli, Simone Paolo Ponzetto

56: A Mouse-Trajectory Based Model for Predicting Query-URL Relevance
Hengjie Song, Ruoxue Liao, Xiangliang Zhang, Chunyan Miao, Qiang Yang

**92: SPARQL Query Containment Under *SHI* Axioms

Melisachew Wudage Chekol, Jérôme Euzenat, Pierre Genevès, Nabil Layaïda

**44: Diagnosing Changes in an Ontology Stream: A DL Reasoning Approach
Freddy Lécué

**64: Ontological Smoothing for Relation Extraction with Minimal Supervision
Congle Zhang, Raphael Hoffmann, Daniel S. Weld

**19: Predictive Mining of Comparable Entities from the Web
Myungha Jang, Jin-woo Park, Seung-won Hwang

Multiagent Systems VIII

738: Evaluating Resistance to False-Name Manipulations in Elections
Bo Waggoner, Lirong Xia, Vincent Conitzer

510: The Price of Neutrality for the Ranked Pairs Method
Markus Brill, Felix Fischer

591: A Complexity-of-Strategic-Behavior Comparison between Schulze's Rule and Ranked Pairs
David C. Parkes, Lirong Xia

**400: Eliminating the Weakest Link: Making Manipulation Intractable?
Jessica Davies, Nina Narodytska, Toby Walsh

**584: A Dynamic Rationalization of Distance Rationalizability
Craig Boutilier, Ariel D. Procaccia

Spotlights Track: Robotics + Vision

Robotics:

What's Hot: Advances at the Intersection of Machine Learning and Robotics
Drew Bagnell

Best Paper: Search-based Path Planning with Homotopy Class Constraints in 3D (Best Paper RSS'11)
Subhrajit Bhattacharya, Maxim Likhachev, Vijay Kumar

Challenges: Combining Machine Intelligence with Mechanical Intelligence in Manipulation
Lael Odhner

Vision:

What's Hot: The Rise of Applied Vision
John Tsotsos

Best Paper: Relative Attributes for Enhanced Human-Machine Communication (David Marr Prize ICCV'11)
Devi Parikh, Adriana Kovashka, Amar Parkash, Kristen Grauman

Challenges: The Main Challenges Facing Object Categorization: Perceptual Grouping and Image Abstraction
Sven Dickinson

4:30 pm – 6:20 pm

Knowledge Representation and Reasoning V

339: Lifted MEU by Weighted Model Counting
Udi Apsel, Ronen I. Brafman

1023: Exact Lifted Inference with Distinct Soft Evidence on Every Object
Hung H. Bui, Tuyen N. Huynh, Rodrigo de Salvo Braz

601: Advances in Lifted Importance Sampling
Vibhav Gogate, Abhay Jha, Deepak Venugopal

**25: An Object-Based Bayesian Framework for Top-Down Visual Attention
Ali Borji, Dicky N. Sihite, Laurent Itti

**572: Symbolic Variable Elimination for Discrete and Continuous Graphical Models
Scott Sanner, Ehsan Abbasnejad

**794: Conditioning in First-Order Knowledge Compilation and Lifted Probabilistic Inference
Guy Van den Broeck, Jesse Davis

Constraints, SAT, & Search III

1153: Search Algorithms for M Best Solutions for Graphical Models
Rina Dechter, Natalia Flerova, Radu Marinescu

573: Trap Avoidance in Local Search Using Pseudo-Conflict Learning
Duc Nghia Pham, Thach-Thao Duong, Abdul Sattar

From Streamlined Combinatorial Search to Efficient Constructive Procedures
Ronan Le Bras, Carla P. Gomes, Bart Selman

**813: Predicting Satisfiability at the Phase Transition
Lin Xu, Holger H. Hoos, Kevin Leyton-Brown

**143: Configuration Checking with Aspiration in Local Search for SAT
Shaowei Cai, Kaile Su

**186: Compiling Model-Based Diagnosis to Boolean Satisfaction
Amit Metodi, Roni Stern, Meir Kalech, Michael Codish

**142: Two New Local Search Strategies for Minimum Vertex Cover
Shaowei Cai, Kaile Su, Abdul Sattar

**429: Don't Be Strict in Local Search!
Serge Gaspers, Eun Jung Kim, Sebastian Ordyniak, Saket Saurabh, Stefan Szeider

**545 Non-Model-Based Search Guidance for Set Partitioning Problems
Serdar Kadioglu, Yuri Malitsky, Meinolf Sellmann

Machine Learning X

98: Probabilistic Models for Common Spatial Patterns: Parameter-Expanded EM and Variational Bayes
Hyohyeong Kang, Seungjin Choi

638: Learning Behavior Models for Hybrid Timed Systems
Oliver Niggemann, Benno Stein, Alexander Maier, Asmir Vodencarevic, Hans Kleine Büning

211: Bayesian Unification of Sound Source Localization and Separation with Permutation Resolution
Takuma Otsuka, Katsuhiko Ishiguro, Hiroshi Sawada, Hiroshi G. Okuno

**868: A Search Algorithm for Latent Variable Models with Unbounded Domains
Michael Chiang, David Poole

**364: Supervised Probabilistic Robust Embedding with Sparse Noise
Yu Zhang, Dit-Yan Yeung, Eric P. Xing

**1186: A Bayesian Approach to the Data Description Problem
Alireza Ghasemi, Hamid R. Rabiee, Mohammad T. Manzuri, M. H. Rohban

**338: Leveraging Domain Knowledge in Multitask Bayesian Network Structure Learning
Diane Oyen, Terran Lane

Robotics II

376: Design and Optimization of an Omnidirectional Humanoid Walk: A Winning Approach at the RoboCup 2011 3D Simulation Competition
Patrick MacAlpine, Samuel Barrett, Daniel Urieli, Victor Vu, Peter Stone

14: Coordinated Multi-Robot Exploration under Communication Constraints Using Decentralized Markov Decision Processes
Laëtitia Matignon, Laurent Jeanpierre, Abdel-Illah Mouaddib

22: Efficient Optimization of Control Libraries
Debadeepta Dey, Tian Yu Liu, Boris Sofman, J. Andrew Bagnell

**32: Searching for Optimal Off-Line Exploration Paths in Grid Environments for a Robot with Limited Visibility
Alberto Quattrini Li, Francesco Amigoni, Nicola Basilico

**11: Automatic Targetless Extrinsic Calibration of a 3D Lidar and Camera by Maximizing Mutual Information
Gaurav Pandey, James R. McBride, Silvio Savarese, Ryan M. Eustice

**51: Mobile Robot Planning to Seek Help with Spatially-Situated Tasks
Stephanie Rosenthal, Manuela Veloso

**10: Occupancy Grid Models for Robot Mapping in Changing Environments
Daniel Meyer-Delius, Maximilian Beinhofer, Wolfram Burgard

**56: Symmetric Rendezvous in Planar Environments with and without Obstacles
Deniz Ozsoyeller, Volkan Isler, Andrew Beveridge

Multiagent Systems IX

594: On Maxsum Fair Cake Divisions
Steven J. Brams, Michal Feldman, John K. Lai, Jamie Morgenstern, Ariel D. Procaccia

1184: Content Recommendation for Attention Management in Unified Social Messaging
Hongxia Jin

568: Time-Critical Influence Maximization in Social Networks with Time-Delayed Diffusion Process
Wei Chen, Wei Lu, Ning Zhang

**751: A Multivariate Complexity Analysis of Lobbying in Multiple Referenda
Robert Bredereck, Jiehua Chen, Sepp Hartung, Rolf Niedermeier, Ondrej Suchy, Stefan Kratsch

**671: Optimal Proportional Cake Cutting with Connected Pieces
Xiaohui Bei, Ning Chen, Xia Hua, Biaoshuai Tao, Endong Yang

Spotlights Track: Human-Computer Interaction

What's Hot: Progress and Hot Trends in Human-Computer Interaction Research
Joseph Konstan

Best Paper: Communitysourcing: Engaging Local Crowds to Perform Expert Work Via Physical Kiosks (Awarded Paper at CHI'12)
Kurtis Heimerl, Brian Gawalt, Tapan Parikh, Bjoern Hartmann

Challenges: Challenges in HCI: The Next 30 Years
Joseph Konstan