## **AAAI-16 Accepted Papers**

(ordered by first author, last name in each proceedings category)

## **AAAI-16 Main Track**

### **Applications**

## 1953

Inferring Multi-Dimensional Ideal Points for US Supreme Court Justices
Mohammad Raihanul Islam, K.S.M. Tozammel Hossain, Siddharth Krishnan, Naren Ramakrishnan

#### 69

Little Is Much: Bridging Cross-Platform Behaviors through Overlapped Crowds Meng Jiang, Peng Cui, Nicholas Jing Yuan, Xing Xie, Shiqiang Yang

#### 2475

Scientific Ranking over Heterogeneous Academic Hypernetwork Ronghua Liang, Xiaorui Jiang

## 2232

MUST-CNN: A Multilayer Shift-and-Stitch Deep Convolutional Architecture for Sequence-Based Protein Structure Prediction

Zeming Lin, Jack Lanchantin, Yanjun Qi

## 2482

Hospital Stockpiling Problems with Inventory Sharing Eric Lofgren, Anil Vullikanti

### 164

Predicting ICU Mortality Risk by Grouping Temporal Trends from a Multivariate Panel of Physiologic Measurements

Yuan Luo, Yu Xin, Rohit Joshi, Leo Celi, Peter Szolovits

### 1044

Learning to Generate Posters of Scientific Papers Yuting Qiang, Yanwei Fu, Yanwen Guo, Zhi-Hua Zhou, Leonid Sigal

## 222

Face Behind Makeup Shuyang Wang, Yun Fu

## 1542

Social Role-Aware Emotion Contagion in Image Social Networks Yang Yang, Jia Jia, Boya Wu, Jie Tang

# 739

Survival Prediction by an Integrated Learning Criterion on Intermittently Varying Healthcare Data Jianfei Zhang, Lifei Chen, Alain Vanasse, Josiane Courteau, Shengrui Wang

# 593

On the Minimum Differentially Resolving Set Problem for Diffusion Source Inference in Networks Chuan Zhou, Wei-Xue Lu, Peng Zhang, Jia Wu, Yue Hu, Li Guo

## Artificial Intelligence and the Web

# 574

From Tweets to Wellness: Wellness Event Detection from Twitter Streams Mohammad Akbari, Xia Hu, Nie Liqiang, Tat-Seng Chua

## 254

"8 Amazing Secrets for Getting More Clicks": Detecting Clickbaits in News Streams Using Article Informality Prakhar Biyani, Kostas Tsioutsiouliklis, John Blackmer

#### 809

Business-Aware Visual Concept Discovery from Social Media for Multimodal Business Venue Recognition Bor-Chun Chen, Yan-Ying Chen, Francine Chen, Dhiraj Joshi

#### 569

Capturing Semantic Correlation for Item Recommendation in Tagging Systems Chaochao Chen, Xiaolin Zheng, Yan Wang, Fuxing Hong, Deren Chen

## 609

Identifying Sentiment Words Using an Optimization Model with L1 Regularization Zhi-Hong Deng, Hongliang Yu, Yunlun Yang

#### 101

Community-Based Question Answering via Heterogeneous Social Network Learning Hanyin Fang, Fei Wu, Zhou Zhao, Xinyu Duan, Yueting Zhuang, Martin Ester

# 1149

College Towns, Vacation Spots, and Tech Hubs: Using Geo-Social Media to Model and Compare Locations Hancheng Ge, James Caverlee

# 422

Inferring A Personalized Next Point-of-Interest Recommendation Model with Latent Behavior Patterns Jing He, Xin Li, Lejian Liao, Dandan Song, William K. Cheung

### 226

VBPR: Visual Bayesian Personalized Ranking from Implicit Feedback Ruining He, Julian McAuley

## 380

Improved Neural Machine Translation with SMT Features Wei He, Zhongjun He, Hua Wu, Haifeng Wang

## 2473

A Scalable Framework to Choose Sellers in E-Marketplaces Using POMDPs Athirai A. Irissappane, Frans A. Oliehoek, Jie Zhang

### 1812

Fusing Social Networks with Deep Learning for Volunteerism Tendency Prediction Yongpo Jia, Xuemeng Song, Jingbo Zhou, Li Liu, Liqiang Nie, David S. Rosenblum

### 966

Detect Overlapping Communities via Ranking Node Popularities

Di Jin, Hongcui Wang, Jianwu Dang, Dongxiao He, Weixiong Zhang

199

Top-N Recommender System via Matrix Completion Zhao Kang, Chong Peng, Qiang Cheng

2304

Robust Text Classification in the Presence of Confounding Bias Virgile Landeiro, Aron Culotta

1071

Predicting the Next Location: A Recurrent Model with Spatial and Temporal Contexts Qiang Liu, Shu Wu, Liang Wang, Tieniu Tan

106

Fortune Teller: Predicting Your Career Path Ye Liu, Luming Zhang, Liqiang Nie, Yan Yan, David S. Rosenblum

561

Predicting Online Protest Participation of Social Media Users
Suhas Ranganath, Fred Morstatter, Xia Hu, Jiliang Tang, Suhang Wang, Huan Liu

441

Context-Sensitive Twitter Sentiment Classification Using Neural Network Yafeng Ren, Yue Zhang, Meishan Zhang, Donghong Ji

2636

ClaimEval: Integrated and Flexible Framework for Claim Evaluation Using Credibility of Sources Mehdi Samadi, Partha Talukdar, Manuela Veloso, Manuel Blum

1475

On the Effectiveness of Linear Models for One-Class Collaborative Filtering Suvash Sedhain, Aditya Krishna Menon, Scott Sanner, Darius Braziunas

904

Supervised Hashing via Uncorrelated Component Analysis SungRyull Sohn, Hyunwoo Kim, Junmo Kim

1758

Commonsense in Parts: Mining Part-Whole Relations from the Web and Image Tags Niket Tandon, Charles Hariman, Jacopo Urbani, Anna Rohrbach, Marcus Rohrbach, Gerhard Weikum

2576

Recommendation with Social Dimensions
Jiliang Tang, Suhang Wang, Xia Hu, Dawei Yin, Yingzhou Bi, Yi Chang, Huan Liu

2285

Column-Oriented Datalog Materialization for Large Knowledge Graphs Jacopo Urbani, Ceriel Jacobs, Markus Krötzsch

2339

Semantic Community Identification in Large Attribute Networks Xiao Wang, Di Jin, Xiaochun Cao, Liang Yang, Weixiong Zhang

Unfolding Temporal Dynamics: Predicting Social Media Popularity Using Multi-Scale Temporal Decomposition Bo Wu, Tao Mei, Wen-Huang Cheng, Yongdong Zhang

### 623

Modeling Users' Preferences and Social Links in Social Networking Services: A Joint-Evolving Perspective Le Wu, Yong Ge, Qi Liu, Enhong Chen, Bai Long, Zhenya Huang

### 2456

Cross-Lingual Taxonomy Alignment with Bilingual Biterm Topic Model Tianxing Wu, Guilin Qi, Haofen Wang, Kang Xu, Xuan Cui

## 1146

Online Cross-Modal Hashing for Web Image Retrieval Liang Xie, Jialie Shen, Lei Zhu

## 1706

Understanding Emerging Spatial Entities
Jinyoung Yeo, Jin-woo Park, Seung-won Hwang

### 742

Building a Large Scale Dataset for Image Emotion Recognition: The Fine Print and the Benchmark Quanzeng You, Jiebo Luo, Hailin Jin, Jianchao Yang

## 1959

STELLAR: Spatial-Temporal Latent Ranking for Successive Point-of-Interest Recommendation Shenglin Zhao, Tong Zhao, Haiqin Yang, Michael R. Lyu, Irwin King

# **Cognitive Modeling**

## 1214

Learning the Preferences of Ignorant, Inconsistent Agents Owain Evans, Andreas Stuhlmueller, Noah D. Goodman

## **Cognitive Systems**

## 839

Egocentric Video Search via Physical Interactions Taiki Miyanishi, Jun-ichiro Hirayama, Quan Kong, Takuya Maekawa, Hiroki Moriya, Takayuki Suyama

# Computational Sustainability and AI

# 1333

Learning Deep Representation from Big and Heterogeneous Data for Traffic Accident Inference Quanjun Chen, Xuan Song, Harutoshi Yamada, Ryosuke Shibasaki

## 2573

Autonomous Electricity Trading Using Time-Of-Use Tariffs in a Competitive Market Daniel Urieli, Peter Stone

## Game Playing and Interactive Entertainment

1362

Reuse of Neural Modules for General Video Game Playing Alexander Braylan, Mark Hollenbeck, Elliot Meyerson, Risto Miikkulainen

400

Poker-CNN: A Pattern Learning Strategy for Making Draws and Bets in Poker Games Using Convolutional Networks

Nikolai Yakovenko, Liangliang Cao, Colin Raffel, James Fan

## **Game Theory and Economic Paradigms**

1929

From Duels to Battlefields: Computing Equilibria of Blotto and Other Games AmirMahdi Ahmadinejad, Sina Dehghani, MohammadTaghi Hajiaghayi, Brendan Lucier, Hamid Mahini, Saeed Seddighin

2016

Maximizing Revenue with Limited Correlation: The Cost of Ex-Post Incentive Compatibility Michael Albert, Vincent Conitzer, Giuseppe Lopomo

1209

Blind, Greedy, and Random: Algorithms for Matching and Clustering Using only Ordinal Information Elliot Anshelevich, Shreyas Sekar

457

Strategyproof Peer Selection: Mechanisms, Analyses, and Experiments Haris Aziz, Omer Lev, Nicholas Mattei, Jeffrey S. Rosenschein, Toby Walsh

1092

A Security Game Combining Patrolling and Alarm-Triggered Responses Under Spatial and Detection Uncertainties Nicola Basilico, Giuseppe De Nittis, Nicola Gatti

690

Learning Market Parameters Using Aggregate Demand Queries Xiaohui Bei, Wei Chen, Jugal Garg, Martin Hoefer, Xiaoming Sun

97

An Algorithmic Framework for Strategic Fair Division Simina Brânzei, Ioannis Caragiannis, David Kurokawa, Ariel D. Procaccia

1256

Computing Possible and Necessary Equilibrium Actions (and Bipartisan Set Winners) Markus Brill, Rupert Freeman, Vincent Conitzer

570

One Size Does Not Fit All: A Game-Theoretic Approach for Dynamically and Effectively Screening for Threats Matthew Brown, Arunesh Sinha, Aaron Schlenker, Milind Tambe

Strategy-Based Warm Starting for Regret Minimization in Games Noam Brown, Tuomas Sandholm

## 1727

Using Correlated Strategies for Computing Stackelberg Equilibria in Extensive-Form Games Jiri Cermak, Branislav Bosansky, Karel Durkota, Viliam Lisy, Christopher Kiekintveld

## 1690

Assignment and Pricing in Roommate Market
Pak Hay Chan, Xin Huang, Zhengyang Liu, Chihao Zhang, Shengyu Zhang

## 2177

Incentives for Strategic Behavior in Fisher Market Games Ning Chen, Xiaotie Deng, Bo Tang, Hongyang Zhang

### 1258

Rules for Choosing Societal Tradeoffs
Vincent Conitzer, Rupert Freeman, Markus Brill, Yuqian Li

### 2246

Judgment Aggregation under Issue Dependencies Marco Costantini, Carla Groenland, Ulle Endriss

### 1148

Price of Pareto Optimality in Hedonic Games Edith Elkind, Angelo Fanelli, Michele Flammini

## 952

Multiwinner Analogues of the Plurality Rule: Axiomatic and Algorithmic Perspectives Piotr Faliszewski, Piotr Skowron, Arkadii Slinko, Nimrod Talmon

## 1818

Ad Auctions and Cascade Model: GSP Inefficiency and Algorithms Gabriele Farina, Nicola Gatti

## 1803

Variations on the Hotelling-Downs Model Michal Feldman, Amos Fiat, Svetlana Obraztsova

## 2599

A Geometric Method to Construct Minimal Peer Prediction Mechanisms Rafael Frongillo, Jens Witkowski

# 1601

Sequence-Form and Evolutionary Dynamics: Realization Equivalence to Agent Form and Logit Dynamics Nicola Gatti, Marcello Restelli

## 2131

Who Can Win a Single-Elimination Tournament?
Michael P. Kim, Warut Suksompong, Virginia Vassilevska Williams

When Can the Maximin Share Guarantee Be Guaranteed? David Kurokawa, Ariel D. Procaccia, Junxing Wang

## 661

Multi-Attribute Proportional Representation Jerome Lang, Piotr Skowron

## 1195

Multi-Defender Strategic Filtering against Spear-Phishing Attacks Aron Laszka, Jian Lou, Yevgeniy Vorobeychik

### 2245

Counterfactual Regret Minimization in Sequential Security Games Viliam Lisy, Trevor Davis, Michael Bowling

### 777

Optimizing Trading Assignments in Water Right Markets Yicheng Liu, Pingzhong Tang, Tingting Xu, Hang Zheng

## 1181

On the Complexity of *m*CP-nets Thomas Lukasiewicz, Enrico Malizia

#### 1082

Reinstating Combinatorial Protections for Manipulation and Bribery in Single-Peaked and Nearly Single-Peaked Electorates

Vijay Menon, Kate Larson

# 2188

Refining Subgames in Large Imperfect Information Games Matej Moravcik, Martin Schmid, Karel Ha, Milan Hladik, Stephen J. Gaukrodger

## 1858

Complexity of Hedonic Games with Dichotomous Preferences Dominik Peters

## 1567

Graphical Hedonic Games of Bounded Treewidth Dominik Peters

## 1545

Preferences Single-Peaked on Nice Trees Dominik Peters, Edith Elkind

# 1291

Fast Optimal Clearing of Capped-Chain Barter Exchanges Benjamin Plaut, John P. Dickerson, Tuomas Sandholm

## 335

Optimal Aggregation of Uncertain Preferences Ariel D. Procaccia, Nisarg Shah

1509

False-Name-Proof Locations of Two Facilities: Economic and Algorithmic Approaches Akihisa Sonoda, Taiki Todo, Makoto Yokoo

## 1199

Closeness Centrality for Networks with Overlapping Community Structure Mateusz K. Tarkowski, Piotr Szczepański, Talal Rahwan, Tomasz P. Michalak, Michael Wooldridge

## 644

Computing Rational Decisions in Extensive Games with Limited Foresight Paolo Turrini

#### 1639

Computing Optimal Monitoring Strategy for Detecting Terrorist Plots Zhen Wang, Yue Yin, Bo An

### 2282

Quantitative Extensions of the Condorcet Jury Theorem with Strategic Agents Lirong Xia

## 2269

Lift-Based Bidding in Ad Selection Jian Xu, Xuhui Shao, Jianjie Ma, Kuang-chih Lee, Hang Qi, Quan Lu

#### 1585

Optimizing Personalized Email Filtering Thresholds to Mitigate Sequential Spear Phishing Attacks Mengchen Zhao, Bo An, Christopher Kiekintveld

# **Heuristic Search and Optimization**

## 1386

Unsupervised Feature Selection by Heuristic Search with Provable Bounds on Suboptimality Hiromasa Arai, Crystal Maung, Ke Xu, Haim Schweitzer

## 974

Tiebreaking Strategies for A\* Search: How to Explore the Final Frontier Masataro Asai, Alex Fukunaga

## 1641

CAPReS: Context Aware Persona Based Recommendation for Shoppers Joydeep Banerjee, Gurulingesh Raravi, Manoj Gupta, Sindhu K. Ernala, Shruti Kunde, Koustuv Dasgupta

## 2532

Nested Monte Carlo Search for Two-Player Games Tristan Cazenave, Abdallah Saffidine, Michael Schofield, Michael Thielscher

# 2528

Look-Ahead with Mini-Bucket Heuristics for MPE Rina Dechter, Kalev Kask, William Lam, Javier Larrosa

## 1267

Solving the Station Repacking Problem Alexandre Fréchette, Neil Newman, Kevin Leyton-Brown

The Complexity Landscape of Decompositional Parameters for ILP Robert Ganian, Sebastian Ordyniak

### 862

Abstract Zobrist Hashing: An Efficient Work Distribution Method for Parallel Best-First Search Yuu Jinnai, Alex Fukunaga

### 766

Learning to Branch in Mixed Integer Programming Elias B. Khalil, Pierre Le Bodic, Le Song, George Nemhauser, Bistra Dilkina

## 1489

Local Search for Hard SAT Formulas: The Strength of the Polynomial Law Sixue Liu, Periklis A. Papakonstantinou

## 911

Fast Proximal Linearized Alternating Direction Method of Multiplier with Parallel Splitting Canyi Lu, Huan Li, Zhouchen Lin, Shuicheng Yan

### 1480

Combining Bounding Boxes and JPS to Prune Grid Pathfinding Steve Rabin, Nathan R. Sturtevant

## 2166

Fast ADMM Algorithm for Distributed Optimization with Adaptive Penalty Changkyu Song, Sejong Yoon, Vladimir Pavlovic

# 1966

Towards Clause-Learning State Space Search: Learning to Recognize Dead-Ends Marcel Steinmetz, Joerg Hoffmann

### 759

Implementing Troubleshooting with Batch Repair Roni Stern, Meir Kalech, Hilla Shinitzky

### 2167

A Combinatorial Search Perspective on Diverse Solution Generation Satya Gautam Vadlamudi, Subbarao Kambhampati

## 2336

On the Completeness of Best-First Search Variants that Use Random Exploration Richard Valenzano, Fan Xie

## 618

DRIMUX: Dynamic Rumor Influence Minimization with User Experience in Social Networks Biao Wang, Ge Chen, Luoyi Fu, Li Song, Xinbing Wang, Xue Liu

## 1289

Linearized Alternating Direction Method with Penalization for Nonconvex and Nonsmooth Optimization Yiyang Wang, Risheng Liu, Xiaoliang Song, Zhixun Su

Two Efficient Local Search Algorithms for Maximum Weight Clique Problem Yiyuan Wang, Shaowei Cai, Minghao Yin

474

Relaxed Majorization-Minimization for Non-Smooth and Non-Convex Optimization Chen Xu, Zhouchen Lin, Zhenyu Zhao, Hongbin Zha

659

Submodular Optimization with Routing Constraints Haifeng Zhang, Yevgeniy Vorobeychik

## **Human-Computation and Crowdsourcing**

272

Behavioral Experiments in Email Filter Evasion Liyiming Ke, Bo Li, Yevgeniy Vorobeychik

### **Humans** and AI

1137

An Oral Exam for Measuring a Dialog System's Capabilities David Cohen, Ian Lane

1761

Intelligent Advice Provisioning for Repeated Interaction Priel Levy, David Sarne

414

A Deep Choice Model Makoto Otsuka, Takayuki Osogami

169

Personalized Alert Agent for Optimal User Performance Avraham Shvartzon, Amos Azaria, Sarit Kraus, Claudia V. Goldman, Joachim Meyer, Omer Tsimhoni

## **Knowledge Representation and Reasoning**

1007

Minimizing User Involvement for Learning Human Mobility Patterns from Location Traces Basma Alharbi, Abdulhakim Qahtan, Xiangliang Zhang

118

Generating CP-Nets Uniformly at Random Thomas E. Allen, Judy Goldsmith, Hayden E. Justice, Nicholas Mattei, Kayla Raines

2628

Boolean Functions with Ordered Domains in Answer Set Programming Mario Alviano, Wolfgang Faber, Hannes Strass

A Semantical Analysis of Second-Order Propositional Modal Logic Francesco Belardinelli, Wiebe van der Hoek

## 1228

A First-Order Logic of Probability and Only Knowing in Unbounded Domains Vaishak Belle, Gerhard Lakemeyer, Hector J. Levesque

## 619

Explaining Inconsistency-Tolerant Query Answering over Description Logic Knowledge Bases Meghyn Bienvenu, Camille Bourgaux, François Goasdoué

## 2690

Automated Verification and Tightening of Failure Propagation Models Benjamin Bittner, Marco Bozzano, Alessandro Cimatti, Gianni Zampedri

### 1599

A Comparative Study of Ranking-Based Semantics for Abstract Argumentation Elise Bonzon, Jérôme Delobelle, Sébastien Konieczny, Nicolas Maudet

### 2001

Beyond OWL 2 QL in OBDA: Rewritings and Approximations Elena Botoeva, Diego Calvanese, Valerio Santarelli, Domenico F. Savo, Alessandro Solimando, Guohui Xiao

## 508

SDDs Are Exponentially More Succinct than OBDDs Simone Bova

# 1025

On the Containment of SPARQL Queries under Entailment Regimes Melisachew Wudage Chekol

## 1611

Logical Foundations of Privacy-Preserving Publishing of Linked Data Bernardo Cuenca Grau, Egor V. Kostylev

## 294

Verifying ConGolog Programs on Bounded Situation Calculus Theories Giuseppe De Giacomo, Yves Lespérance, Fabio Patrizi, Sebastian Sardina

## 160

Qualitative Spatio-Temporal Stream Reasoning with Unobservable Intertemporal Spatial Relations Using Landmarks

Daniel de Leng, Fredrik Heintz

## 1712

Using Decomposition-Parameters for QBF: Mind the Prefix! Eduard Eiben, Robert Ganian, Sebastian Ordyniak

# 2019

The Complexity of LTL on Finite Traces: Hard and Easy Fragments Valeria Fionda, Gianluigi Greco

SAT-to-SAT: Declarative Extension of SAT Solvers with New Propagators Tomi Janhunen, Shahab Tasharrofi, Eugenia Ternovska

#### 566

Knowledge Graph Completion with Adaptive Sparse Transfer Matrix Guoliang Ji, Kang Liu, Shizhu He, Jun Zhao

## 1742

Locally Adaptive Translation for Knowledge Graph Embedding Yantao Jia, Yuanzhuo Wang, Hailun Lin, Xiaolong Jin, Xueqi Cheng

## 175

Learning Abductive Reasoning Using Random Examples Brendan Juba

## 641

A Model for Learning Description Logic Ontologies Based on Exact Learning Boris Konev, Ana Ozaki, Frank Wolter

### 1755

Agenda Separability in Judgment Aggregation Jérôme Lang, Marija Slavkovik, Srdjan Vesic

### 1175

Basic Probabilistic Ontological Data Exchange with Existential Rules Thomas Lukasiewicz, Maria Vanina Martinez, Livia Predoiu, Gerardo I. Simari

### 1832

Resistance to Corruption of Strategic Argumentation Michael J. Maher

## 1206

Causal Explanation Under Indeterminism: A Sampling Approach Christopher A. Merck, Samantha Kleinberg

## 1662

'Knowing Whether' in Proper Epistemic Knowledge Bases Tim Miller, Paolo Felli, Christian Muise, Adrian Pearce, Liz Sonenberg

## 1170

Ontology-Mediated Queries for NOSQL Databases Marie-Laure Mugnier, Marie-Christine Rousset, Federico Ulliana

# 2381

Zero-Suppressed Sentential Decision Diagrams
Masaaki Nishino, Norihito Yasuda, Shin-ichi Minato, Masaaki Nagata

## 2297

Scalable Training of Markov Logic Networks Using Approximate Counting Somdeb Sarkhel, Deepak Venugopal, Tuan Anh Pham, Parag Singla, Vibhav Gogate

Metaphysics of Planning Domain Descriptions Siddharth Srivastava, Stuart Russell, Alessandro Pinto

### 1231

Expressive Recommender Systems through Normalized Nonnegative Models Cyril J. Stark

## 975

Complexity Results and Algorithms for Extension Enforcement in Abstract Argumentation Johannes P. Wallner, Andreas Niskanen, Matti Järvisalo

### 1249

Query Answering with Inconsistent Existential Rules under Stable Model Semantics Hai Wan, Heng Zhang, Peng Xiao, Haoran Huang, Yan Zhang

#### 1004

Affinity Preserving Quantization for Hashing: A Vector Quantization Approach to Learning Compact Binary Codes Zhe Wang, Ling-Yu Duan, Tiejun Huang, Wen Gao

## 1075

Decidable Verification of Golog Programs over Non-Local Effect Actions Benjamin Zarrieß, Jens Claßen

#### 2569

Mapping Action Language BC to Logic Programs: A Characterization by Postulates Haodi Zhang, Fangzhen Lin

# **Machine Learning Applications**

# 1779

On the Performance of GoogLeNet and AlexNet Applied to Sketches Pedro Ballester, Ricardo Matsumura Araujo

## 1246

Bayesian Inference of Recursive Sequences of Group Activities from Tracks Ernesto Brau, Colin Dawson, Alfredo Carrillo, David Sidi, Clayton T. Morrison

## 655

Towards Domain Adaptive Vehicle Detection in Satellite Image by Supervised Super-Resolution Transfer Liujuan Cao, Rongrong Ji, Cheng Wang, Jonathan Li

## 87

Deep Neural Networks for Learning Graph Representations Shaosheng Cao, Wei Lu, Qiongkai Xu

# 1058

Discriminative Nonparametric Latent Feature Relational Models with Data Augmentation Bei Chen, Ning Chen, Jun Zhu, Jiaming Song, Bo Zhang

## 391

Mitosis Detection in Breast Cancer Histology Images via Deep Cascaded Networks Hao Chen, Qi Dou, Xi Wang, Jing Qin, Pheng-Ann Heng

Deep Contextual Networks for Neuronal Structure Segmentation Hao Chen, Xiaojuan Qi, Jie-Zhi Cheng, Pheng-Ann Heng

## 550

Seeing the Unseen Network: Inferring Hidden Social Ties from Respondent-Driven Sampling Lin Chen, Forrest W. Crawford, Amin Karbasi

#### 201

Robust Multi-View Subspace Learning through Dual Low-Rank Decompositions Zhengming Ding, Yun Fu

### 1588

Graph-without-Cut: An Ideal Graph Learning for Image Segmentation Lianli Gao, Jingkuan Song, Feiping Nie, Fuhao Zou, Nicu Sebe, Heng Tao Shen

## 2595

MOOCs Meet Measurement Theory: A Topic-Modelling Approach
Jiazhen He, Benjamin I. P. Rubinstein, James Bailey, Rui Zhang, Sandra Milligan, Jeffrey Chan

## 1247

Creating Images by Learning Image Semantics Using Vector Space Models Derrall Heath, Dan Ventura

## 1374

Efficient Learning of Timeseries Shapelets Lu Hou, James T. Kwok, Jacek M. Zurada

# 1049

Learning to Appreciate the Aesthetic Effects of Clothing Jia Jia, Jie Huang, Guangyao Shen, Tao He, Zhiyuan Liu, Huanbo Luan, Chao Yan

### 309

Consensus Style Centralizing Auto-Encoder for Weak Style Classification Shuhui Jiang, Ming Shao, Chengcheng Jia, Yun Fu

### 84

Column Sampling Based Discrete Supervised Hashing Wang-Cheng Kang, Wu-Jun Li, Zhi-Hua Zhou

## 1269

A Framework for Outlier Description Using Constraint Programming Chia-Tung Kuo, Ian Davidson

# 124

Random Mixed Field Model for Mixed-Attribute Data Restoration Qiang Li, Wei Bian, Richard Yi Da Xu, Jane You, Dacheng Tao

## 1840

Learning with Marginalized Corrupted Features and Labels Together Yingming Li, Ming Yang, Zenglin Xu, Zhongfei (Mark) Zhang

Towards Optimal Binary Code Learning via Ordinal Embedding Hong Liu, Rongrong Ji, Yongjian Wu, Wei Liu

#### 388

Recognizing Complex Activities by a Probabilistic Interval-Based Model Li Liu, Li Cheng, Ye Liu, Yongpo Jia, David S. Rosenblum

## 1438

Learning Adaptive Forecasting Models from Irregularly Sampled Multivariate Clinical Data Zitao Liu, Milos Hauskrecht

## 191

Deep Learning for Algorithm Portfolios Andrea Loreggia, Yuri Malitsky, Horst Samulowitz, Vijay Saraswat

### 1355

Convolutional Neural Networks over Tree Structures for Programming Language Processing Lili Mou, Ge Li, Lu Zhang, Tao Wang, Zhi Jin

### 2420

Learning Tractable Probabilistic Models for Fault Localization Aniruddh Nath, Pedro Domingos

### 1732

Unsupervised Feature Selection with Structured Graph Optimization Feiping Nie, Wei Zhu, Xuelong Li

# 898

Differential Privacy Preservation for Deep Auto-Encoders: An Application of Human Behavior Prediction NhatHai Phan, Yue Wang, Xintao Wu, Dejing Dou

## 134

Privacy-CNH: A Framework to Detect Photo Privacy with Convolutional Neural Network Using Hierarchical Features

Lam Tran, Deguang Kong, Hongxia Jin, Ji Liu

## 2084

Drosophila Gene Expression Pattern Annotations via Multi-Instance Biological Relevance Learning Hua Wang, Cheng Deng, Hao Zhang, Xinbo Gao, Heng Huang

## 318

Recommending Groups to Users Using User-Group Engagement and Time-Dependent Matrix Factorization Xin Wang, Roger Donaldson, Christopher Nell, Peter Gorniak, Martin Ester, Jiajun Bu

## 393

Instilling Social to Physical: Co-Regularized Heterogeneous Transfer Learning Ying Wei, Yin Zhu, Cane Wing-ki Leung, Yangqiu Song, Qiang Yang

### 1

Exploiting an Oracle That Reports AUC Scores in Machine Learning Contests Jacob Whitehill

Efficient Nonparametric Subgraph Detection Using Tree Shaped Priors Nannan Wu, Feng Chen, Jianxin Li, Baojian Zhou, Naren Ramakrishnan

#### 2348

Factorization Ranking Model for Move Prediction in the Game of Go Chenjun Xiao, Martin Müller

## 693

Joint Multi-View Representation Learning and Image Tagging Zhe Xue, Guorong Li, Qingming Huang

## 52

Learning Deep Convolutional Neural Networks for X-Ray Protein Crystallization Image Analysis Margot Lisa-Jing Yann, Yichuan Tang

## 602

Linear Submodular Bandits with a Knapsack Constraint Baosheng Yu, Meng Fang, Dacheng Tao

### 1476

Submodular Asymmetric Feature Selection in Cascade Object Detection Baosheng Yu, Meng Fang, Dacheng Tao, Jie Yin

## 738

Semisupervised Autoencoder for Sentiment Analysis Shuangfei Zhai, Zhongfei (Mark) Zhang

# 942

Simultaneous Feature and Sample Reduction for Image-Set Classification Man Zhang, Ran He, Dong Cao, Zhenan Sun, Tieniu Tan

## 355

Collective Noise Contrastive Estimation for Policy Transfer Learning Weinan Zhang, Ulrich Paquet, Katja Hofmann

## 2004

Learning a Hybrid Architecture for Sequence Regression and Annotation Yizhe Zhang, Ricardo Henao, Lawrence Carin, Jianling Zhong, Alexander J. Hartemink

## 519

Pose-Dependent Low-Rank Embedding for Head Pose Estimation Handong Zhao, Zhengming Ding, Yun Fu

# 370

Cold-Start Heterogeneous-Device Wireless Localization Vincent W. Zheng, Hong Cao, Shenghua Gao, Aditi Adhikari, Miao Lin, Kevin Chen-Chuan Chang

# 1561

Tracking Idea Flows between Social Groups Yangxin Zhong, Shixia Liu, Xiting Wang, Jiannan Xiao, Yangqiu Song

1055

Fast Hybrid Algorithm for Big Matrix Recovery Tengfei Zhou, Hui Qian, Zebang Shen, Congfu Xu

## **Machine Learning Methods**

#### 2094

Data Poisoning Attacks against Autoregressive Models Scott Alfeld, Xiaojin Zhu, Paul Barford

### 1000

Approximate K-Means++ in Sublinear Time Olivier Bachem, Mario Lucic, S. Hamed Hassani, Andreas Krause

## 2185

Incremental Stochastic Factorization for Online Reinforcement Learning Andre M. S. Barreto, Rafael L. Beirigo, Joelle Pineau, Doina Precup

## 734

Increasing the Action Gap: New Operators for Reinforcement Learning Marc G. Bellemare, Georg Ostrovski, Arthur Guez, Philip S. Thomas, Remi Munos

## 2240

Decoding Hidden Markov Models Faster than Viterbi Via Online Matrix-Vector (max, +)-Multiplication Massimo Cairo, Gabriele Farina, Romeo Rizzi

## 572

Maximum Margin Dirichlet Process Mixtures for Clustering Gang Chen, Haiying Zhang, Caiming Xiong

## 1396

Progressive EM for Latent Tree Models and Hierarchical Topic Detection Peixian Chen, Nevin L. Zhang, Leonard K. M. Poon, Zhourong Chen

## 372

Knowledge Transfer with Interactive Learning of Semantic Relationships Jonghyun Choi, Sung Ju Hwang, Leonid Sigal, Larry S. Davis

## 1442

Robustness of Bayesian Pool-Based Active Learning Against Prior Misspecification Nguyen Viet Cuong, Nan Ye, Wee Sun Lee

## 1142

Learning Step Size Controllers for Robust Neural Network Training Christian Daniel, Jonathan Taylor, Sebastian Nowozin

# 327

Generalised Brown Clustering and Roll-Up Feature Generation Leon Derczynski, Sean Chester

## 1317

Random Composite Forests Giulia DeSalvo, Mehryar Mohri

Reconstructing Hidden Permutations Using the Average-Precision (AP) Correlation Statistic Lorenzo De Stefani, Alessandro Epasto, Eli Upfal, Fabio Vandin

## 458

The Ostomachion Process Xuhui Fan, Bin Li, Yi Wang, Yang Wang, Fang Chen

#### 939

Indexable Probabilistic Matrix Factorization for Maximum Inner Product Search Marco Fraccaro, Ulrich Paquet, Ole Winther

## 105

Fast Lasso Algorithm via Selective Coordinate Descent Yasuhiro Fujiwara, Yasutoshi Ida, Hiroaki Shiokawa, Sotetsu Iwamura

## 2022

Group and Graph Joint Sparsity for Linked Data Classification Longwen Gao, Shuigeng Zhou

### 2061

Risk Minimization in the Presence of Label Noise Wei Gao, Lu Wang, Yu-Feng Li, Zhi-Hua Zhou

### 834

Decentralized Approximate Bayesian Inference for Distributed Sensor Network Behnam Gholami, Sejong Yoon, Vladimir Pavlovic

# 2271

Assumed Density Filtering Methods for Learning Bayesian Neural Netwo Soumya Ghosh, Francesco Maria Delle Fave, Jonathan Yedidia

### 1177

Extending the Modelling Capacity of Gaussian Conditional Random Fields while Learning Faster Jesse Glass, Mohamed Ghalwash, Milan Vukicevic, Zoran Obradovic

### 1268

Uncertainty Propagation in Long-Term Structured Regression on Evolving Networks Djordje Gligorijevic, Jelena Stojanovic, Zoran Obradovic

## 71

Teaching-to-Learn and Learning-to-Teach for Multi-Label Propagation Chen Gong, Dacheng Tao, Jie Yang, Wei Liu

## 219

Discriminative Analysis Dictionary Learning
Jun Guo, Yanqing Guo, Xiangwei Kong, Man Zhang, Ran He

## 849

Active Learning with Cross-Class Knowledge Transfer Yuchen Guo, Guiguang Ding, Yuqi Wang, Xiaoming Jin

Generalized Emphatic Temporal Difference Learning: Bias-Variance Analysis Assaf Hallak, Aviv Tamar, Remi Munos, Shie Mannor

#### 1054

Multi-Stage Multi-Task Learning with Reduced Rank Lei Han, Yu Zhang

## 1057

Reduction Techniques for Graph-Based Convex Clustering Lei Han, Yu Zhang

## 2349

SAND: Semi-Supervised Adaptive Novel Class Detection and Classification over Data Stream Ahsanul Haque, Latifur Khan, Michael Baron

### 2293

Flattening the Density Gradient for Eliminating Spatial Centrality to Reduce Hubness Kazuo Hara, Ikumi Suzuki, Kei Kobayashi, Kenji Fukumizu, Milos Radovanovic

### 1096

Discriminative Vanishing Component Analysis Chenping Hou, Feiping Nie, Dacheng Tao

## 347

Common and Discriminative Subspace Kernel-Based Multiblock Tensor Partial Least Squares Regression Ming Hou, Qibin Zhao, Brahim Chaib-draa, Andrzej Cichocki

## 874

Multi-Label Manifold Learning Peng Hou, Xin Geng, Min-Ling Zhang

## 2225

Optimal Discrete Matrix Completion Zhouyuan Huo, Ji Liu, Heng Huang

## 757

Conservativeness of Untied Auto-Encoders
Daniel Jiwoong Im, Mohamed Ishmael Belghazi, Roland Memisevic

## 903

Infinite Plaid Models for Infinite Bi-Clustering Katsuhiko Ishiguro, Issei Sato, Masahiro Nakano, Akisato Kimura, Naonori Ueda

# 1204

Improving Predictive State Representations via Gradient Descent Nan Jiang, Alex Kulesza, Satinder Singh

# 2162

A Probabilistic Approach to Knowledge Translation Shangpu Jiang, Daniel Lowd, Dejing Dou

# 2086

The I2,1-Norm Stacked Robust Autoencoders for Domain Adaptation Wenhao Jiang, Hongchang Gao, Fu-lai Chung, Heng Huang

### 367

Wishart Mechanism for Differentially Private Principal Components Analysis Wuxuan Jiang, Cong Xie, Zhihua Zhang

## 1769

Deep Learning with S-Shaped Rectified Linear Activation Units Xiaojie Jin, Chunyan Xu, Jiashi Feng, Yunchao Wei, Junjun Xiong, Shuicheng Yan

#### 2498

Delay-Tolerant Online Convex Optimization: Unified Analysis and Adaptive-Gradient Algorithms Pooria Joulani, Andras Gyorgy, Csaba Szepesvari

#### 779

Shakeout: A New Regularized Deep Neural Network Training Scheme Guoliang Kang, Jun Li, Dacheng Tao

## 535

Bounded Optimal Exploration in MDP Kenji Kawaguchi

## 1188

Uncorrelated Group LASSO Deguang Kong, Ji Liu, Bo Liu, Xuan Bao

# 1293

Learning Future Classifiers without Additional Data Atsutoshi Kumagai, Tomoharu Iwata

## 2053

Compressed Conditional Mean Embeddings for Model-Based Reinforcement Learning Guy Lever, John Shawe-Taylor, Ronnie Stafford, Csaba Szepesvari

## 1193

Preconditioned Stochastic Gradient Langevin Dynamics for Deep Neural Networks Chunyuan Li, Changyou Chen, David Carlson, Lawrence Carin

## 2256

High-Order Stochastic Gradient Thermostats for Bayesian Learning of Deep Models Chunyuan Li, Changyou Chen, Kai Fan, Lawrence Carin

## 1751

Multi-Objective Self-Paced Learning Hao Li, Maoguo Gong, Deyu Meng, Qiguang Miao

## 1354

Scalable Sequential Spectral Clustering Yeqing Li, Junzhou Huang, Wei Liu

### 1660

Towards Safe Semi-Supervised Learning for Multivariate Performance Measures

Yu-Feng Li, James T. Kwok, Zhi-Hua Zhou

### 450

Accelerating Random Kaczmarz Algorithm Based on Clustering Information Yujun Li, Kaichun Mo, Haishan Ye

#### 721

Fast and Accurate Refined Nystrom Based Kernel SVM Zhe Li, Tianbao Yang, Lijun Zhang, Rong Jin

## 1229

How Important Is Weight Symmetry in Backpropagation? Qianli Liao, Joel Z. Leibo, Tomaso Poggio

## 1119

Re-Active Learning: Active Learning with Relabeling Christopher H. Lin, Mausam, Daniel S. Weld

## 604

Interaction Point Processes via Infinite Branching Model Peng Lin, Bang Zhang, Ting Guo, Yang Wang, Fang Chen

## 2572

Gaussian Process Planning with Lipschitz Continuous Reward Functions: Towards Unifying Bayesian Optimization, Active Learning, and Beyond Chun Kai Ling, Kian Hsiang Low, Patrick Jaillet

# 446

Online ARIMA Algorithms for Time Series Prediction Chenghao Liu, Steven C. H. Hoi, Peilin Zhao, Jianling Sun

## 434

Consensus Guided Unsupervised Feature Selection Hongfu Liu, Ming Shao, Yun Fu

## 864

Sparse Perceptron Decision Tree for Millions of Dimensions Weiwei Liu, Ivor W. Tsang

## 476

Multiple Kernel k-Means Clustering with Matrix-Induced Regularization Xinwang Liu, Yong Dou, Jianping Yin, Lei Wang, En Zhu

## 527

Finding One's Best Crowd: Online Learning by Exploiting Source Similarity Yang Liu, Mingyan Liu

## 1488

Learning FRAME Models Using CNN Filters Yang Lu, Song-Chun Zhu, Ying Nian Wu

### 1625

Sparse Latent Space Policy Search

Kevin Sebastian Luck, Joni Pajarinen, Erik Berger, Ville Kyrki, Heni Ben Amor

### 784

Expected Tensor Decomposition with Stochastic Gradient Descent Takanori Maehara, Kohei Hayashi, Ken-ichi Kawarabayashi

### 1283

Offline Evaluation of Online Reinforcement Learning Algorithms Travis Mandel, Yun-En Liu, Emma Brunskill, Zoran Popović

## 679

Reinforcement Learning with Parameterized Actions Warwick Masson, Pravesh Ranchod, George Konidaris

## 207

Fixed-Rank Supervised Metric Learning on Riemannian Manifold Yadong Mu

### 2412

All-in Text: Learning Document, Label, and Word Representations Jointly Jinseok Nam, Eneldo Loza Mencía, Johannes Fürnkranz

### 1310

Holographic Embeddings of Knowledge Graphs Maximilian Nickel, Lorenzo Rosasco, Tomaso Poggio

## 2657

New I1-Norm Relaxations and Optimizations for Graph Clustering Feiping Nie, Hua Wang, Cheng Deng, Xinbo Gao, Xuelong Li, Heng Huang

## 1667

The Constrained Laplacian Rank Algorithm for Graph-Based Clustering Feiping Nie, Xiaoqian Wang, Michael I. Jordan, Heng Huang

## 2355

Efficient PAC-Optimal Exploration in Concurrent, Continuous State MDPs with Delayed Updates Jason Pazis, Ronald Parr

## 1618

Viral Clustering: A Robust Method to Extract Structures in Heterogeneous Datasets Vahan Petrosyan, Alexandre Proutiere

## 1645

Inverse Reinforcement Learning through Policy Gradient Minimization Matteo Pirotta, Marcello Restelli

# 1728

Scaling Simultaneous Optimistic Optimization for High-Dimensional Non-Convex Functions with Low Effective Dimensions
Hong Qian, Yang Yu

### 2124

Selecting Near-Optimal Learners via Incremental Data Allocation

Ashish Sabharwal, Horst Samulowitz, Gerald Tesauro

#### 1718

Scalable Algorithms for Tractable Schatten Quasi-Norm Minimization Fanhua Shang, Yuanyuan Liu, James Cheng

### 354

Spectral Bisection Tree Guided Deep Adaptive Exemplar Autoencoder for Unsupervised Domain Adaptation Ming Shao, Zhengming Ding, Handong Zhao, Yun Fu

### 1511

Metric Learning for Ordinal Data Yuan Shi, Wenzhe Li, Fei Sha

## 556

Noisy Submodular Maximization via Adaptive Sampling with Applications to Crowdsourced Image Collection Summarization

Adish Singla, Sebastian Tschiatschek, Andreas Krause

## 788

Bayesian Matrix Completion via Adaptive Relaxed Spectral Regularization Yang Song, Jun Zhu

## 2138

Marginalized Continuous Time Bayesian Networks for Network Reconstruction from Incomplete Observations Lukas Studer, Loic Pauleve, Christoph Zechner, Matthias Reumann, Maria Rodriguez Martinez, Heinz Koeppl

# 547

Return of Frustratingly Easy Domain Adaptation Baochen Sun, Jiashi Feng, Kate Saenko

# 920

On the Depth of Deep Neural Networks: A Theoretical View Shizhao Sun, Wei Chen, Liwei Wang, Xiaoguang Liu, Tie-Yan Liu

## 2114

Linear-Time Learning on Distributions with Approximate Kernel Embeddings Dougal J. Sutherland, Junier B. Oliva, Barnabas Poczos, Jeff Schneider

## 1828

Learning Sparse Confidence-Weighted Classifier on Very High Dimensional Data Mingkui Tan, Yan Yan, Li Wang, Anton Van Den Hengel, Ivor W. Tsang, Qinfeng (Javen) Shi

## 1735

Algorithms for Differentially Private Multi-Armed Bandits Aristide C. Y. Tossou, Christos Dimitrakakis

# 1813

Deep Reinforcement Learning with Double Q-Learning Hado van Hasselt, Arthur Guez, David Silver

### 740

Online Instrumental Variable Regression with Applications to Online Linear System Identification

Arun Venkatraman, Wen Sun, Martial Hebert, J. Andrew Bagnell, Byron Boots

#### 732

The Hidden Convexity of Spectral Clustering James Voss, Mikhail Belkin, Luis Rademacher

#### 2260

Multitask Generalized Eigenvalue Program Boyu Wang, Joelle Pineau, Borja Balle

### 586

Product Grassmann Manifold Representation and Its LRR Models Boyue Wang, Yongli Hu, Junbin Gao, Yanfeng Sun, Baocai Yin

## 2077

Text Classification with Heterogeneous Information Network Kernels Chenguang Wang, Yangqiu Song, Haoran Li, Ming Zhang, Jiawei Han

## 1554

Semi-Supervised Dictionary Learning via Structural Sparse Preserving Di Wang, Xiaoqin Zhang, Mingyu Fan, Xiuzi Ye

### 1659

Relational Knowledge Transfer for Zero-Shot Learning Donghui Wang, Yanan Li, Yuetan Lin, Yueting Zhuang

## 1487

Optimizing Multivariate Performance Measures from Multi-View Data Jim Jing-Yan Wang, Ivor Wai-Hung Tsang, Xin Gao

# 2739

An Efficient Time Series Subsequence Pattern Mining and Prediction Framework with an Application to Respiratory Motion Prediction
Shouyi Wang, Kin Ming Kam, Cao Xiao, Stephen Bowen, W. Chaovalitwongse

## 504

Co-Regularized PLSA For Multi-Modal Learning Xin Wang, Ming-Ching Chang, Yiming Ying, Siwei Lyu

## 73

Toward a Better Understanding of Deep Neural Network Based Acoustic Modelling: An Empirical Investigation Xingfu Wang, Lin Wang, Jing Chen, Litao Wu

## 506

Noise-Adaptive Margin-Based Active Learning and Lower Bounds under Tsybakov Noise Condition Yining Wang, Aarti Singh

## 2400

Learning by Transferring from Unsupervised Universal Sources Yu-Xiong Wang, Martial Hebert

### 186

Learning Deep €0 Encoders

Zhangyang Wang, Qing Ling, Thomas S. Huang

### 1070

Adaptive Normalized Risk-Averting Training for Deep Neural Networks Zhiguang Wang, Tim Oates, James Lo

#### 513

Nonlinear Feature Extraction with Max-Margin Data Shifting Jianqiao Wangni, Ning Chen

#### 1613

Unsupervised Feature Selection on Networks: A Generative View Xiaokai Wei, Bokai Cao, Philip S. Yu

## 662

Model-Free Preference-Based Reinforcement Learning Christian Wirth, Johannes Fürnkranz, Gerhard Neumann

## 605

Constrained Submodular Minimization for Missing Labels and Class Imbalance in Multi-Label Learning Baoyuan Wu, Siwei Lyu, Bernard Ghanem

## 1370

Representing Sets of Instances for Visual Recognition Jianxin Wu, Bin-Bin Gao, Guoqing Liu

## 497

Robust Semi-Supervised Learning through Label Aggregation Yan Yan, Zhongwen Xu, Ivor W. Tsang, Guodong Long, Yi Yang

## 832

Analysis-Synthesis Dictionary Learning for Universality-Particularity Representation Based Classification Meng Yang, Weiyang Liu, Weixin Luo, Linlin Shen

## 325

Efficient Average Reward Reinforcement Learning Using Constant Shifting Values Shangdong Yang, Yang Gao, Bo An, Hao Wang, Xingguo Chen

## 1218

Learning Continuous-Time Bayesian Networks in Relational Domains: A Non-Parametric Approach Shuo Yang, Tushar Khot, Kristian Kersting, Sriraam Natarajan

## 320

Instance Specific Metric Subspace Learning: A Bayesian Approach Han-Jia Ye, De-Chuan Zhan, Yuan Jiang

# 1440

Scalable Completion of Nonnegative Matrices with the Separable Structure Xiyu Yu, Wei Bian, Dacheng Tao

## 1504

Derivative-Free Optimization via Classification Yang Yu, Hong Qian, Yi-Qi Hu

On Order-Constrained Transitive Distance Clustering Zhiding Yu, Weiyang Liu, Wenbo Liu, Yingzhen Yang, Ming Li, B. V. K. Vijaya Kumar

### 667

A Proximal Alternating Direction Method for Semi-Definite Rank Minimization Ganzhao Yuan, Bernard Ghanem

### 321

Learning Expected Hitting Time Distance De-Chuan Zhan, Peng Hu, Zui Chu, Zhi-Hua Zhou

## 428

Stochastic Optimization for Kernel PCA
Lijun Zhang, Tianbao Yang, Jinfeng Yi, Rong Jin, Zhi-Hua Zhou

## 2011

Asynchronous Distributed Semi-Stochastic Gradient Optimization Ruiliang Zhang, Shuai Zheng, James T. Kwok

### 1097

An Alternating Proximal Splitting Method with Global Convergence for Nonconvex Structured Sparsity Optimization
Shubao Zhang, Hui Qian, Xiaojin Gong

## 789

Accelerated Sparse Linear Regression via Random Projection Weizhong Zhang, Lijun Zhang, Rong Jin, Deng Cai, Xiaofei He

## 1334

Large-Scale Graph-Based Semi-Supervised Learning via Tree Laplacian Solver Yan-Ming Zhang, Xu-Yao Zhang, Xiao-Tong Yuan, Cheng-Lin Liu

## 2548

Near-Optimal Active Learning of Multi-Output Gaussian Processes Yehong Zhang, Trong Nghia Hoang, Kian Hsiang Low, Mohan Kankanhalli

## 2007

Multi-Domain Active Learning for Recommendation Zihan Zhang, Xiaoming Jin, Lianghao Li, Guiguang Ding, Qiang Yang

## 2071

On the Differential Privacy of Bayesian Inference Zuhe Zhang, Benjamin I. P. Rubinstein, Christos Dimitrakakis

# 451

A Scalable and Extensible Framework for Superposition-Structured Models Shenjian Zhao, Cong Xie, Zhihua Zhang

## 968

Fast Asynchronous Parallel Stochastic Gradient Descent: A Lock-Free Approach with Convergence Guarantee Shen-Yi Zhao, Wu-Jun Li

DinTucker: Scaling Up Gaussian Process Models on Large Multidimensional Arrays Shandian Zhe, Yuan Qi, Youngja Park, Zenglin Xu, Ian Molloy, Suresh Chari

1912

Fast Nonsmooth Regularized Risk Minimization with Continuation Shuai Zheng, Ruiliang Zhang, James T. Kwok

1009

Transfer Learning for Cross-Language Text Categorization through Active Correspondences Construction Joey Tianyi Zhou, Sinno Jialin Pan, Ivor W. Tsang, Shen-Shyang Ho

1517

Veto-Consensus Multiple Kernel Learning Yuxun Zhou, Ninghang Hu, Costas J. Spanos

281

Deep Hashing Network for Efficient Similarity Retrieval Han Zhu, Mingsheng Long, Jianmin Wang, Yue Cao

793

Coupled Dictionary Learning for Unsupervised Feature Selection Pengfei Zhu, Qinghua Hu, Changqing Zhang, Wangmeng Zuo

292

Stochastic Parallel Block Coordinate Descent for Large-Scale Saddle Point Problems Zhanxing Zhu, Amos J. Storkey

# **Multiagent Systems**

2064

Temporal Vaccination Games Under Resource Constraints Abhijin Adiga, Anil Vullikanti

723

Detection of Plan Deviation in Multi-Agent Systems Bikramjit Banerjee, Steven Loscalzo, Daniel Lucas Thompson

928

Complexity of Shift Bribery in Committee Elections Robert Bredereck, Piotr Faliszewski, Rolf Niedermeier, Nimrod Talmon

1676

Global Model Checking on Pushdown Multi-Agent Systems Taolue Chen, Fu Song, Zhilin Wu

1421

Frugal Bribery in Voting Palash Dey, Neeldhara Misra, Y. Narahari

885

Target Surveillance in Adversarial Environments Using POMDPs Maxim Egorov, Mykel J. Kochenderfer, Jaak J. Uudmae

41

Multi-Variable Agents Decomposition for DCOPs Ferdinando Fioretto, William Yeoh, Enrico Pontelli

2380

Implicit Coordination in Crowded Multi-Agent Navigation Julio Godoy, Ioannis Karamouzas, Stephen J. Guy, Maria Gini

953

Emergence of Social Punishment and Cooperation through Prior Commitments The Anh Han

1910

Efficient Computation of Emergent Equilibrium in Agent-Based Simulation Zehong Hu, Meng Sha, Moath Jarrah, Jie Zhang, Hui Xi

1205

Strengthening Agents Strategic Ability with Communication Xiaowei Huang, Qingliang Chen, Kaile Su

1030

Model Checking Probabilistic Knowledge: A PSPACE Case Xiaowei Huang, Marta Kwiatkowska

2279

Learning for Decentralized Control of Multiagent Systems in Large, Partially-Observable Stochastic Environments Miao Liu, Christopher Amato, Emily P. Anesta, J. Daniel Griffith, Jonathan P. How

2437

Bayesian Learning of Other Agents' Finite Controllers for Interactive POMDPs Alessandro Panella, Piotr Gmytrasiewicz

1236

Exploiting Anonymity in Approximate Linear Programming: Scaling to Large Multiagent MDPs Philipp Robbel, Frans A. Oliehoek, Mykel J. Kochenderfer

1298

ConTaCT: Deciding to Communicate during Time-Critical Collaborative Tasks in Unknown, Deterministic Domains Vaibhav V. Unhelkar, Julie A. Shah

2644

Is It Harmful When Advisors Only Pretend to Be Honest? Dongxia Wang, Tim Muller, Jie Zhang, Yang Liu

1826

Robust Execution of BDI Agent Programs by Exploiting Synergies between Intentions Yuan Yao, Brian Logan, John Thangarajah

Natural Language Processing and Knowledge Representation

Short Text Representation for Detecting Churn in Microblogs Hadi Amiri, Hal Daume III

### 2399

Topic Concentration in Query Focused Summarization Datasets Tal Baumel, Raphael Cohen, Michael Elhadad

### 2393

Combining Retrieval, Statistics, and Inference to Answer Elementary Science Questions
Peter Clark, Oren Etzioni, Tushar Khot, Ashish Sabharwal, Oyvind Tafjord, Peter Turney, Daniel Khashabi

## 1135

Verb Pattern: A Probabilistic Semantic Representation on Verbs Wanyun Cui, Xiyou Zhou, Hangyu Lin, Yanghua Xiao, Haixun Wang, Seung-won Hwang, Wei Wang

## 906

ExTaSem! Extending, Taxonomizing and Semantifying Domain Terminologies Luis Espinosa-Anke, Horacio Saggion, Francesco Ronzano, Roberto Navigli

### 27

A Unified Bayesian Model of Scripts, Frames and Language Francis Ferraro, Benjamin Van Durme

## 1999

Single or Multiple? Combining Word Representations Independently Learned from Text and WordNet Josu Goikoetxea, Eneko Agirre, Aitor Soroa

# 1518

Representing Verbs as Argument Concepts Yu Gong, Kaiqi Zhao, Kenny Q. Zhu

### 2640

A Generative Model of Words and Relationships from Multiple Sources Stephanie L. Hyland, Theofanis Karaletsos, Gunnar Rätsch

### 632

Agreement on Target-Bidirectional LSTMs for Sequence-to-Sequence Learning Lemao Liu, Andrew Finch, Masao Utiyama, Eiichiro Sumita

## 369

Fine-Grained Semantic Conceptualization of FrameNet Jin-woo Park, Seung-won Hwang, Haixun Wang

# 156

Dependency Tree Representations of Predicate-Argument Structures Likun Qiu, Yue Zhang, Meishan Zhang

## 1227

Complementing Semantic Roles with Temporally-Anchored Spatial Knowledge: Crowdsourced Annotations and Experiments

Alakananda Vempala, Eduardo Blanco

Representation Learning of Knowledge Graphs with Entity Descriptions Ruobing Xie, Zhiyuan Liu, Jia Jia, Huanbo Luan, Maosong Sun

## 929

Hashtag-Based Sub-Event Discovery Using Mutually Generative LDA in Twitter Chen Xing, Yuan Wang, Jie Liu, Yalou Huang, Wei-Ying Ma

### 1721

PEAK: Pyramid Evaluation via Automated Knowledge Extraction Qian Yang, Rebecca J. Passonneau, Gerard de Melo

## Natural Language Processing and Machine Learning

### 168

Instructable Intelligent Personal Agent Amos Azaria, Jayant Krishnamurthy, Tom M. Mitchell

### 2183

Joint Word Representation Learning using a Corpus and a Semantic Lexicon Danushka Bollegala, Alsuhaibani Mohammed, Takanori Maehara, Ken-ichi Kawarabayashi

### 33

Ask, and Shall You Receive?: Understanding Desire Fulfillment in Natural Language Text Snigdha Chaturvedi, Dan Goldwasser, Hal Daume III

# 1201

Modeling Evolving Relationships between Characters in Literary Novels Snigdha Chaturvedi, Shashank Srivastava, Hal Daume III, Chris Dyer

## 1609

Jointly Modeling Topics and Intents with Global Order Structure Bei Chen, Jun Zhu, Nan Yang, Tian Tian, Ming Zhou, Bo Zhang

## 2389

Extracting Biomolecular Interactions Using Semantic Parsing of Biomedical Text Sahil Garg, Aram Galstyan, Ulf Hermjakob, Daniel Marcu

### 70

What Happens Next? Event Prediction Using a Compositional Neural Network Model Mark Granroth-Wilding, Stephen Clark

# 1548

A Representation Learning Framework for Multi-Source Transfer Parsing Jiang Guo, Wanxiang Che, David Yarowsky, Haifeng Wang, Ting Liu

## 722

Character-Aware Neural Language Models Yoon Kim, Yacine Jernite, David Sontag, Alexander M. Rush Implicit Discourse Relation Classification via Multi-Task Neural Networks Yang Liu, Sujian Li, Xiaodong Zhang, Zhifang Sui

## 1051

Convolution Kernels for Discriminative Learning from Streaming Text Michal Lukasik, Trevor Cohn

## 1501

Numerical Relation Extraction with Minimal Supervision Aman Madaan, Ashish Mittal, Mausam, Ganesh Ramakrishnan, Sunita Sarawagi

### 1280

Listen, Attend, and Walk: Neural Mapping of Navigational Instructions to Action Sequences Hongyuan Mei, Mohit Bansal, Matthew R. Walter

### 2386

Addressing a Question Answering Challenge by Combining Statistical Methods with Inductive Rule Learning and Reasoning

Arindam Mitra, Chitta Baral

### 1279

Siamese Recurrent Architectures for Learning Sentence Similarity Jonas Mueller, Aditya Thyagarajan

## 390

Text Matching as Image Recognition Liang Pang, Yanyan Lan, Jiafeng Guo, Jun Xu, Shengxian Wan, Xueqi Cheng

### 720

Learning Statistical Scripts with LSTM Recurrent Neural Networks Karl Pichotta, Raymond J. Mooney

## 2288

Inferring Interpersonal Relations in Narrative Summaries Shashank Srivastava, Snigdha Chaturvedi, Tom Mitchell

## 2443

Evaluation of Semantic Dependency Labeling Across Domains Svetlana Stoyanchev, Amanda Stent, Srinivas Bangalore

## 251

Inside Out: Two Jointly Predictive Models for Word Representations and Phrase Representations Fei Sun, Jiafeng Guo, Yanyan Lan, Jun Xu, Xueqi Cheng

# 1900

Non-Linear Similarity Learning for Compositionality Masashi Tsubaki, Kevin Duh, Masashi Shimbo, Yuji Matsumoto

## 240

A Deep Architecture for Semantic Matching with Multiple Positional Sentence Representations Shengxian Wan, Yanyan Lan, Jiafeng Guo, Jun Xu, Liang Pang, Xueqi Cheng

Morphological Segmentation with Window LSTM Neural Networks Linlin Wang, Zhu Cao, Yu Xia, Gerard de Melo

193

Minimally-Constrained Multilingual Embeddings via Artificial Code-Switching Michael Wick, Pallika Kanani, Adam Pocock

772

Syntactic Skeleton-Based Translation
Tong Xiao, Jingbo Zhu, Chunliang Zhang, Tongran Liu

670

A Morphology-Aware Network for Morphological Disambiguation Eray Yildiz, Caglar Tirkaz, H. Bahadir Sahin, Mustafa Tolga Eren, Omer Ozan Sonmez

915

Building Earth Mover's Distance on Bilingual Word Embeddings for Machine Translation Meng Zhang, Yang Liu, Huanbo Luan, Maosong Sun, Tatsuya Izuha, Jie Hao

594

Semi-Supervised Multinomial Naive Bayes for Text Classification by Leveraging Word-Level Statistical Constraint Li Zhao, Minlie Huang, Ziyu Yao, Rongwei Su, Yingying Jiang, Xiaoyan Zhu

## Natural Language Processing and Text Mining

2467

Labeling the Semantic Roles of Commas Naveen Arivazhagan, Christos Christodoulopoulos, Dan Roth

694

Collective Supervision of Topic Models for Predicting Surveys with Social Media Adrian Benton, Michael J. Paul, Braden Hancock, Mark Dredze

1839

Distant IE by Bootstrapping Using Lists and Document Structure Lidong Bing, Mingyang Ling, Richard C. Wang, William W. Cohen

502

TGSum: Build Tweet Guided Multi-Document Summarization Dataset Ziqiang Cao, Chengyao Chen, Wenjie Li, Sujian Li, Furu Wei, Ming Zhou

2634

Joint Inference over a Lightly Supervised Information Extraction Pipeline: Towards Event Coreference Resolution for Resource-Scarce Languages
Chen Chen, Vincent Ng

893

Discourse Relations Detection via a Mixed Generative-Discriminative Framework Jifan Chen, Qi Zhang, Pengfei Liu, Xuanjing Huang

1801

Age of Exposure: A Model of Word Learning

Mihai Dascalu, Danielle S. McNamara, Scott Crossley, Stefan Trausan-Matu

#### 2630

Acquiring Knowledge of Affective Events from Blogs Using Label Propagation Haibo Ding, Ellen Riloff

#### 1343

To Swap or Not to Swap? Exploiting Dependency Word Pairs for Reordering in Statistical Machine Translation Christian Hadiwinoto, Yang Liu, Hwee Tou Ng

### 1566

Global Distant Supervision for Relation Extraction Xianpei Han, Le Sun

## 243

Extracting Topical Phrases from Clinical Documents Yulan He

## 744

Topical Analysis of Interactions Between News and Social Media Ting Hua, Yue Ning, Feng Chen, Chang-Tien Lu, Naren Ramakrishnan

## 1604

News Verification by Exploiting Conflicting Social Viewpoints in Microblogs Zhiwei Jin, Juan Cao, Yongdong Zhang, Jiebo Luo

## 520

Argument Mining from Speech: Detecting Claims in Political Debates Marco Lippi, Paolo Torroni

# 587

Improving Opinion Aspect Extraction Using Semantic Similarity and Aspect Associations Qian Liu, Bing Liu, Yuanlin Zhang, Doo Soon Kim, Zhiqiang Gao

## 601

A Probabilistic Soft Logic Based Approach to Exploiting Latent and Global Information in Event Classification Shulin Liu, Kang Liu, Shizhu He, Jun Zhao

## 1849

Reading the Videos: Temporal Labeling for Crowdsourced Time-Sync Videos Based on Semantic Embedding Guangyi Lv, Tong Xu, Enhong Chen, Qi Liu, Yi Zheng

## 425

Joint Word Segmentation, POS-Tagging and Syntactic Chunking Chen Lyu, Yue Zhang, Donghong Ji

# 2324

Microsummarization of Online Reviews: An Experimental Study Rebecca Mason, Benjamin Gaska, Benjamin Van Durme, Pallavi Choudhury, Ted Hart, Bill Dolan, Kristina Toutanova, Margaret Mitchell

### 2591

A Semi-Supervised Learning Approach to Why-Question Answering

Jong-Hoon Oh, Kentaro Torisawa, Chikara Hashimoto, Ryu lida, Masahiro Tanaka, Julien Kloetzer

#### 2111

Discovering User Attribute Stylistic Differences via Paraphrasing Daniel Preotiuc-Pietro, Wei Xu, Lyle Ungar

#### 490

Improving Twitter Sentiment Classification Using Topic-Enriched Multi-Prototype Word Embeddings Yafeng Ren, Yue Zhang, Meishan Zhang, Donghong Ji

## 1308

Temporal Topic Analysis with Endogenous and Exogenous Processes Baiyang Wang, Diego Klabjan

## 405

Identifying Search Keywords for Finding Relevant Social Media Posts Shuai Wang, Zhiyuan Chen, Bing Liu, Sherry Emery

## 931

Personalized Microblog Sentiment Classification via Multi-Task Learning Fangzhao Wu, Yongfeng Huang

### 469

Improving Recommendation of Tail Tags for Questions in Community Question Answering Yu Wu, Wei Wu, Xiang Zhang, Zhoujun Li, Ming Zhou

## 1361

Exploring Multiple Feature Spaces for Novel Entity Discovery Zhaohui Wu, Yang Song, C. Lee Giles

# 1198

Tweet Timeline Generation with Determinantal Point Processes
Jin-ge Yao, Feifan Fan, Wayne Xin Zhao, Xiaojun Wan, Edward Chang, Jianguo Xiao

## 185

Gated Neural Networks for Targeted Sentiment Analysis Meishan Zhang, Yue Zhang, Duy-Tin Vo

## 522

A Joint Model for Question Answering over Multiple Knowledge Bases Yuanzhe Zhang, Shizhu He, Kang Liu, Jun Zhao

## 1568

A Joint Model for Entity Set Expansion and Attribute Extraction from Web Search Queries Zhenzhong Zhang, Le Sun, Xianpei Han

# 1484

Aggregating Inter-Sentence Information to Enhance Relation Extraction Hao Zheng, Zhoujun Li, Senzhang Wang, Zhao Yan, Jianshe Zhou

# Planning and Scheduling

Dynamic Controllability of Disjunctive Temporal Networks: Validation and Synthesis of Executable Strategies Alessandro Cimatti, Andrea Micheli, Marco Roveri

### 1452

Truncated Approximate Dynamic Programming with Task-Dependent Terminal Value Amir-massoud Farahmand, Daniel N. Nikovski, Yuji Igarashi, Hiroki Konaka

## 2394

General Error Bounds in Heuristic Search Algorithms for Stochastic Shortest Path Problems Eric A. Hansen, Ibrahim Abdoulahi

## 271

Solving Risk-Sensitive POMDPs with and without Cost Observations Ping Hou, William Yeoh, Pradeep Varakantham

### 2695

Randomised Procedures for Initialising and Switching Actions in Policy Iteration Shivaram Kalyanakrishnan, Neeldhara Misra, Aditya Gopalan

### 512

Goal Recognition Design with Non-Observable Actions Sarah Keren, Avigdor Gal, Erez Karpas

### 50

Computing Contingent Plans Using Online Replanning Radimir Komarnitsky, Guy Shani

# 2239

Multi-Agent Path Finding with Payload Transfers and the Package-Exchange Robot-Routing Problem Hang Ma, Craig Tovey, Guni Sharon, T. K. Satish Kumar, Sven Koenig

## 2286

Solving Transition-Independent Multi-agent MDPs with Sparse Interactions
Joris Scharpff, Diederik M. Roijers, Frans A. Oliehoek, Matthijs T. J. Spaan, Mathijs M. de Weerdt

## 1202

Solving Goal Recognition Design Using ASP Tran Cao Son, Orkunt Sabuncu, Christian Schulz-Hanke, Torsten Schaub, William Yeoh

## 2115

Efficient Macroscopic Urban Traffic Models for Reducing Congestion: A PDDL+ Planning Approach Mauro Vallati, Daniele Magazzeni, Bart De Schutter, Lukas Chrpa, Thomas L. McCluskey

# 1990

A Proactive Sampling Approach to Project Scheduling under Uncertainty Pradeep Varakantham, Na Fu, Hoong Chuin Lau

# 1160

A POMDP Formulation of Proactive Learning Kyle Hollins Wray, Shlomo Zilberstein

Approximation Algorithms for Route Planning with Nonlinear Objectives Ger Yang, Evdokia Nikolova

# **Reasoning under Uncertainty**

#### 1226

Approximate Probabilistic Inference via Word-Level Counting Supratik Chakraborty, Kuldeep S. Meel, Rakesh Mistry, Moshe Y. Vardi

### 683

A Symbolic SAT-Based Algorithm for Almost-Sure Reachability with Small Strategies in POMDPs Krishnendu Chatterjee, Martin Chmelík, Jessica Davies

## 2433

Structured Features in Naive Bayes Classification Arthur Choi, Nazgol Tavabi, Adnan Darwiche

### 2425

On Parameter Tying by Quantization Li Chou, Somdeb Sarkhel, Nicholas Ruozzi, Vibhav Gogate

## 2060

Exact Sampling with Integer Linear Programs and Random Perturbations Carolyn Kim, Ashish Sabharwal, Stefano Ermon

## 2139

From Exact to Anytime Solutions for Marginal Map Junkyu Lee, Radu Marinescu, Rina Dechter, Alexander Ihler

## 534

On Learning Causal Models from Relational Data Sanghack Lee, Vasant Honavar

## 1918

Online Spatio-Temporal Matching in Stochastic and Dynamic Domains Meghna Lowalekar, Pradeep Varakantham, Patrick Jaillet

## 1322

Scaling Relational Inference Using Proofs and Refutations Ravi Mangal, Xin Zhang, Aditya Kamath, Aditya V. Nori, Mayur Naik

## 2607

Closed-Form Gibbs Sampling for Graphical Models with Algebraic Constraints Hadi Mohasel Afshar, Scott Sanner, Christfried Webers

# 313

Learning Bayesian Networks with Bounded Tree-Width via Guided Search Siqi Nie, Cassio P. de Campos, Qiang Ji

## 1210

Learning Ensembles of Cutset Networks Tahrima Rahman, Vibhav Gogate

RAO\*: An Algorithm for Chance-Constrained POMDP's Pedro Santana, Sylvie Thiébaux, Brian Williams

2045

Separators and Adjustment Sets in Markov Equivalent DAGs Benito van der Zander, Maciej Liskiewicz

2427

Closing the Gap Between Short and Long XORs for Model Counting Shengjia Zhao, Sorathan Chaturapruek, Ashish Sabharwal, Stefano Ermon

### **Robotics**

2253

Distance Minimization for Reward Learning from Scored Trajectories Benjamin Burchfiel, Carlo Tomasi, Ronald Parr

860

Efficient Spatio-Temporal Tactile Object Recognition with Randomized Tiling Convolutional Networks in a Hierarchical Fusion Strategy

Lele Cao, Ramamohanarao Kotagiri, Fuchun Sun, Hongbo Li, Wenbing Huang, Zay Maung Maung Aye

1939

Continual Planning in Golog

Till Hofmann, Tim Niemueller, Jens Claßen, Gerhard Lakemeyer

2377

Selectively Reactive Coordination for a Team of Robot Soccer Champions
Juan Pablo Mendoza, Joydeep Biswas, Philip Cooksey, Richard Wang, Steven Klee, Danny Zhu, Manuela Veloso

1217

Deep Tracking: Seeing Beyond Seeing Using Recurrent Neural Networks Peter Ondruska, Ingmar Posner

# Search and Constraint Satisfaction

1225

Component Caching in Hybrid Domains with Piecewise Polynomial Densities Vaishak Belle, Guy Van den Broeck, Andrea Passerini

1105

The Meta-Problem for Conservative Mal'tsev Constraints Clement Carbonnel

831

Steiner Tree Problems with Side Constraints Using Constraint Programming Diego de Uña, Graeme Gange, Peter Schachte, Peter J. Stuckey

Alternative Filtering for the Weighted Circuit Constraint: Comparing Lower Bounds for the TSP and Solving TSPTW Sylvain Ducomman, Hadrien Cambazard, Bernard Penz

### 2352

Using the Shapley Value to Analyze Algorithm Portfolios Alexandre Fréchette, Lars Kotthoff, Tomasz Michalak, Talal Rahwan, Holger H. Hoos, Kevin Leyton-Brown

#### 1079

On the Extraction of One Maximal Information Subset That Does Not Conflict with Multiple Contexts Éric Grégoire, Yacine Izza, Jean-Marie Lagniez

#### 627

Bidirectional Search That Is Guaranteed to Meet in the Middle Robert C. Holte, Ariel Felner, Guni Sharon, Nathan R. Sturtevant

#### 1719

Breaking More Composition Symmetries Using Search Heuristics Jimmy H. M. Lee, Zichen Zhu

### 1736

Increasing Nogoods in Restart-Based Search
Jimmy H. M. Lee, Christian Schulte, Zichen Zhu

#### 2385

Exponential Recency Weighted Average Branching Heuristic for SAT Solvers Jia Hui Liang, Vijay Ganesh, Pascal Poupart, Krzysztof Czarnecki

# 2234

Counting-Based Search for Constraint Optimization Problems Gilles Pesant

# Vision

#### 2080

Are Elephants Bigger than Butterflies? Reasoning about Sizes of Objects Hessam Bagherinezhad, Hannaneh Hajishirzi, Yejin Choi, Ali Farhadi

#### 81

Deep Quantization Network for Efficient Image Retrieval Yue Cao, Mingsheng Long, Jianmin Wang, Han Zhu, Qingfu Wen

## 2507

Dynamic Concept Composition for Zero-Example Event Detection Xiaojun Chang, Yi Yang, Guodong Long, Chengqi Zhang, Alexander G. Hauptmann

# 2500

Face Video Retrieval via Deep Learning of Binary Hash Representations Zhen Dong, Su Jia, Tianfu Wu, Mingtao Pei

# 895

Zero-Shot Event Detection by Multimodal Distributional Semantic Embedding of Videos Mohamed Elhoseiny, Jingen Liu, Hui Cheng, Harpreet Sawhney, Ahmed Elgammal

Concepts Not Alone: Exploring Pairwise Relationships for Zero-Shot Video Activity Recognition Chuang Gan, Ming Lin, Yi Yang, Gerard de Melo, Alexander G. Hauptmann

# 499

Transductive Zero-Shot Recognition via Shared Model Space Learning Yuchen Guo, Guiguang Ding, Xiaoming Jin, Jianmin Wang

#### 1950

Reading Scene Text in Deep Convolutional Sequences
Pan He, Weilin Huang, Yu Qiao, Chen Change Loy, Xiaoou Tang

#### 8

Structured Output Prediction for Semantic Perception in Autonomous Vehicles Rein Houthooft, Cedric De Boom, Stijn Verstichel, Femke Ongenae, Filip De Turck

#### 536

Robust Complex Behaviour Modeling at 90Hz Xiangyu Kong, Yizhou Wang, Tao Xiang

#### 1255

Exploiting View-Specific Appearance Similarities Across Classes for Zero-Shot Pose Prediction: A Metric Learning Approach

Alina Kuznetsova, Sung Ju Hwang, Bodo Rosenhahn, Leonid Sigal

#### 452

Labeling the Features, Not the Samples: Efficient Video Classification with Minimal Supervision Marius Leordeanu, Alexandra Radu, Shumeet Baluja, Rahul Sukthankar

# 329

Decentralized Robust Subspace Clustering Bo Liu, Xiao-Tong Yuan, Yang Yu, Qingshan Liu, Dimitris N. Metaxas

#### 1447

Articulated Pose Estimation Using Hierarchical Exemplar-Based Models Jiongxin Liu, Yinxiao Li, Peter Allen, Peter Belhumeur

#### 30

Multi-View 3D Human Tracking in Crowded Scenes Xiaobai Liu

## 463

Face Model Compression by Distilling Knowledge from Neurons Ping Luo, Zhenyao Zhu, Ziwei Liu, Xiaogang Wang, Xiaoou Tang

# 682

Learning to Answer Questions from Image Using Convolutional Neural Network Lin Ma, Zhengdong Lu, Hang Li

# 1326

SentiCap: Generating Image Descriptions with Sentiments Alexander Mathews, Lexing Xie, Xuming He

Look, Listen and Learn - A Multimodal LSTM for Speaker Identification Jimmy Ren, Yongtao Hu, Yu-Wing Tai, Chuan Wang, Li Xu, Wenxiu Sun, Qiong Yan

### 2078

Toward a Taxonomy and Computational Models of Abnormalities in Images Babak Saleh, Ahmed Elgammal, Jacob Feldman, Ali Farhadi

#### 901

Domain-Constraint Transfer Coding for Imbalanced Unsupervised Domain Adaptation Yao-Hung Hubert Tsai, Cheng-An Hou, Wei-Yu Chen, Yi-Ren Yeh, Yu-Chiang Frank Wang

### 467

Recognizing Actions in 3D Using Action-Snippets and activated Simplices Chunyu Wang, John Flynn, Yizhou Wang, Alan L. Yuille

### 844

DARI: Distance Metric and Representation Integration for Person Verification Guangrun Wang, Liang Lin, Shengyong Ding, Ya Li, Qing Wang

#### 384

Video Semantic Clustering with Sparse and Incomplete Tags Jingya Wang, Xiatian Zhu, Shaogang Gong

#### 312

Path Following with Adaptive Path Estimation for Graph Matching Tao Wang, Haibin Ling

### 2305

Pose-Guided Human Parsing by an AND/OR Graph Using Pose-Context Features Fangting Xia, Jun Zhu, Peng Wang, Alan L. Yuille

#### 675

Diversified Dynamical Gaussian Process Latent Variable Model for Video Repair Hao Xiong, Tongliang Liu, Dacheng Tao

### 2074

Metric Embedded Discriminative Vocabulary Learning for High-Level Person Representation Yang Yang, Zhen Lei, Shifeng Zhang, Hailin Shi, Stan Z. Li

# 403

Large Scale Similarity Learning Using Similar Pairs for Person Verification Yang Yang, Shengcai Liao, Zhen Lei, Stan Z. Li

# 480

Unsupervised Co-activity Detection from Multiple Videos Using Absorbing Markov Chain Donghun Yeo, Bohyung Han, Joon Hee Han

# 1020

Discrete Image Hashing Using Large Weakly Annotated Photo Collections Hanwang Zhang, Na Zhao, Xindi Shang, Huanbo Luan, Tat-seng Chua

Group Cost-Sensitive Boosting for Multi-Resolution Pedestrian Detection Chao Zhu, Yuxin Peng

252

Learning Cross-Domain Neural Networks for Sketch-Based 3D Shape Retrieval Fan Zhu, Jin Xie, Yi Fang

310

MC-HOG Correlation Tracking with Saliency Proposal Guibo Zhu, Jinqiao Wang, Yi Wu, Xiaoyu Zhang, Hanqing Lu

326

Co-occurrence Feature Learning for Skeleton Based Action Recognition Using Regularized Deep LSTM Networks Wentao Zhu, Cuiling Lan, Junliang Xing, Wenjun Zeng, Yanghao Li, Li Shen, Xiaohui Xie

# Special Track on Cognitive Systems

2474

Using Multiple Representations to Simultaneously Learn Computational Thinking and Middle School Science Satabdi Basu, Gautam Biswas, John Kinnebrew

2169

MIDCA: A Metacognitive, Integrated Dual-Cycle Architecture for Self-Regulated Autonomy Michael T. Cox, Zohreh Alavi, Dustin Dannenhauer, Vahid Eyorokon, Hector Munoz-Avila, Don Perlis

2101

Commonsense Interpretation of Triangle Behavior Andrew S. Gordon

2159

Surprise-Triggered Reformulation of Design Goals Kazjon Grace, Mary Lou Maher

189

Visual Learning of Arithmetic Operation Yedid Hoshen, Shmuel Peleg

2703

Modeling Human Ad Hoc Coordination
Peter M. Krafft, Chris L. Baker, Alex "Sandy" Pentland, Joshua B. Tenenbaum

1860

Predicting Readers' Sarcasm Understandability by Modeling Gaze Behavior Abhijit Mishra, Diptesh Kanojia, Pushpak Bhattacharyya

2529

Modeling Human Understanding of Complex Intentional Action with a Bayesian Nonparametric Subgoal Model Ryo Nakahashi, Chris L. Baker, Joshua B. Tenenbaum

2027

Unsupervised Lexical Simplification for Non-Native Speakers

# Gustavo H. Paetzold, Lucia Specia

1630

QART: A System for Real-Time Holistic Quality Assurance for Contact Center Dialogues Shourya Roy, Ragunathan Mariappan, Sandipan Dandapat, Saurabh Srivastava, Sainyam Galhotra, Balaji Peddamuthu

852

Building End-To-End Dialogue Systems Using Generative Hierarchical Neural Network Models Iulian Vlad Serban, Alessandro Sordoni, Yoshua Bengio, Aaron Courville, Joelle Pineau

# Special Track on Computational Sustainability and AI

1491

Achieving Stable and Fair Profit Allocation with Minimum Subsidy in Collaborative Logistics Lucas Agussurja, Hoong Chuin Lau, Shih-Fen Cheng

1302

Understanding City Traffic Dynamics Utilizing Sensor and Textual Observations
Pramod Anantharam, Krishnaprasad Thirunarayan, Surendra Marupudi, Amit Sheth, Tanvi Banerjee

1686

An Axiomatic Framework for Ex-Ante Dynamic Pricing Mechanisms in Smart Grid Sambaran Bandyopadhyay, Ramasuri Narayanam, Pratyush Kumar, Sarvapali Ramchurn, Vijay Arya, Iskandarbin Petra

912

Multi-Instance Multi-Label Class Discovery: A Computational Approach for Assessing Bird Biodiversity Forrest Briggs, Xiaoli Z. Fern, Raviv Raich, Matthew Betts

1546

Multiagent-Based Route Guidance for Increasing the Chance of Arrival on Time Zhiguang Cao, Hongliang Guo, Jie Zhang, Ulrich Fastenrath

1972

Understanding Dominant Factors for Precipitation over the Great Lakes Region Soumyadeep Chatterjee, Stefan Liess, Arindam Banerjee, Vipin Kumar

1907

A Unifying Variational Inference Framework for Hierarchical Graph-Coupled HMM with an Application to Influenza Infection

Kai Fan, Chunyuan Li, Katherine Heller

1248

Topic Models to Infer Socio-Economic Maps Lingzi Hong, Enrique Frias-Martinez, Vanessa Frias-Martinez

1189

Energy- and Cost-Efficient Pumping Station Control

Timon V. Kanters, Frans A. Oliehoek, Michael Kaisers, Stan R. van den Bosch, Joep Grispen, Jeroen Hermans

Shortest Path Based Decision Making Using Probabilistic Inference Akshat Kumar

### 2040

Robust Decision Making for Stochastic Network Design Akshat Kumar, Arambam James Singh, Pradeep Varakantham, Daniel Sheldon

### 1993

Optimizing Infrastructure Enhancements for Evacuation Planning Kunal Kumar, Julia Romanski, Pascal Van Hentenryck

#### 582

Spatially Regularized Streaming Sensor Selection Changsheng Li, Fan Wei, Weishan Dong, Xiangfeng Wang, Junchi Yan, Xiaobin Zhu, Qingshan Liu, Xin Zhang

#### 545

Preventing Illegal Logging: Simultaneous Optimization of Resource Teams and Tactics for Security Sara Mc Carthy, Milind Tambe, Christopher Kiekintveld, Meredith L. Gore, Alex Killion

### 1100

Big-Data Mechanisms and Energy-Policy Design Ankit Pat, Kate Larson, Srinivasen Keshav

### 1759

Benders Decomposition for Large-Scale Prescriptive Evacuations Julia Romanski, Pascal Van Hentenryck

# 2000

Predicting Spatio-Temporal Propagation of Seasonal Influenza Using Variational Gaussian Process Regression Ransalu Senanayake, Simon O'Callaghan, Fabio Ramos

### 34

Intelligent Habitat Restoration under Uncertainty Tommaso Urli, Jana Brotánková, Philip Kilby, Pascal Van Hentenryck

### 2487

Adaptable Regression Method for Ensemble Consensus Forecasting John K. Williams, Peter P. Neilley, Joseph P. Koval, Jeff McDonald

### 1085

Optimizing Resilience in Large Scale Networks Xiaojian Wu, Daniel Sheldon, Shlomo Zilberstein

### 1671

Transfer Learning from Deep Features for Remote Sensing and Poverty Mapping Michael Xie, Neal Jean, Marshall Burke, David Lobell, Stefano Ermon

#### 1938

An Algorithm to Coordinate Measurements Using Stochastic Human Mobility Patterns in Large-Scale Participatory Sensing Settings

Alexandros Zenonos, Sebastian Stein, Nicholas R. Jennings

## Special Track on Integrated AI Capabilities

259

Bagging Ensembles for the Diagnosis and Prognostication of Alzheimer's Disease Peng Dai, Femida Gwadry-Sridhar, Michael Bauer, Michael Borrie

1187

Affective Personalization of a Social Robot Tutor for Children's Second Language Skills Goren Gordon, Samuel Spaulding, Jacqueline Kory Westlund, Jin Joo Lee, Luke Plummer, Marayna Martinez, Madhurima Das, Cynthia Breazeal

509

A Framework for Resolving Open-World Referential Expressions in Distributed Heterogeneous Knowledge Bases Tom Williams, Matthias Scheutz

# Innovative Applications of Artificial Intelligence

**Deployed Application Case Studies** 

2

Deploying PAWS: Field Optimization of the Protection Assistant for Wildlife Security
Fei Fang, Thanh H. Nguyen, Rob Pickles, Wai Y. Lam, Gopalasamy R. Clements, Bo An, Amandeep Singh, Milind
Tambe, Andrew Lemieux

28

Ontology Re-Engineering: A Case Study from the Automotive Industry
Nestor Rychtyckyj, Venkatesh Raman, Baskaran Sankaranarayanan, P Sreenivasa Kumar, Deepak Khemani

10

Deploying nEmesis: Preventing Foodborne Illness by Data Mining Social Media Adam Sadilek, Henry Kautz, Lauren DiPrete, Brian Labus, Eric Portman, Jack Teitel, Vincent Silenzio

**Emerging Application Case Studies** 

42

An Autonomous Override System to Prevent Airborne Loss of Control Sweewarman Balachandran, Ella M. Atkins

12

Document Type Classification in Online Digital Libraries Cornelia Caragea, Jian Wu, Sujatha Das Gollapalli, C. Lee Giles

Data-Augmented Software Diagnosis Amir Elmishali, Roni Stern, Meir Kalech

16

Automated Regression Testing Using Constraint Programming Arnaud Gotlieb, Mats Carlsson, Marius Liaeen, Dusica Marijan, Alexandre Petillon

19

Wikipedia in the Tourism Industry: Forecasting Demand and Modeling Usage Behavior Pejman Khadivi, Naren Ramakrishnan

Optimizing Energy Costs in a Zinc and Lead Mine

Alan Kinsella, Alan F. Smeaton, Barry Hurley, Barry O'Sullivan, Helmut Simonis

33

Automated Capture and Execution of Manufacturability Rules Using Inductive Logic Programming Abha Moitra, Ravi Palla, Arvind Rangarajan

36

MetaSeer.STEM:Towards Automating Meta-Analyses Kishore Neppalli, Cornelia Caragea, Robin Mayes, Kim Nimon, Fred Oswald

11

Data Driven Game Theoretic Cyber Threat Mitigation John Robertson, Vivin Paliath, Jana Shakarian, Amanda Thart, Paulo Shakarian

39

Automated Volumetric Intravascular Plaque Classification Using Optical Coherence Tomography (OCT) Ronny Shalev, Daisuke Nakamura, Setsu Nishino, Andrew M. Rollins, Hiram G. Bezerra, David L. Wilson, Soumya Ray

24

A Hidden Markov Model Approach to Infer Timescales for High-Resolution Climate Archives Mai Winstrup

Challenge Problem Paper

Infusing Human Factors into Algorithmic Crowdsourcing Han Yu, Chunyan Miao, Zhiqi Shen, Jun Lin, Cyril Leung, Qiang Yang

# Symposium on Educational Advances in Artificial Intelligence

**Full Papers** 

2

Using Domain Knowledge to Improve Monte-Carlo Tree Search Performance in Parameterized Poker Squares Robert Arrington, Clay Langley, Steven Bogaerts

13

BeeMo, a Monte Carlo Simulation Agent for Playing Parameterized Poker Squares Karo Castro-Wunsch, William Maga, Calin Anton

27

Conceptualizing Curse of Dimensionality with Parallel Coordinates G Devi, Charu Chauhan, Sutanu Chakraborti

30

Teaching Big Data Analytics Skills with Intelligent Workflow Systems Yolanda Gil

Design of an Online Course on Knowledge-Based Al Ashok K. Goel, David A. Joyner

12

Learning and Using Hand Abstraction Values for Parameterized Poker Squares Todd W. Neller, Colin M. Messinger, Zuozhi Yang

14

Creating Interactive and Visual Educational Resources for Al Sameer Singh, Sebastian Riedel

18

From the Lab to the Classroom and Beyond: Extending a Game-Based Research Platform for Teaching AI to Diverse Audiences

Nicole Sintov, Debarun Kar, Thanh Nguyen, Fei Fang, Kevin Hoffman, Arnaud Lyet, Milind Tambe

4

The Turing Test in the Classroom Lisa Torrey, Karen Johnson, Sid Sondergard, Pedro Ponce, Laura Desmond

32

A Survey of Current Practice and Teaching of AI Michael Wollowski, Robert Selkowitz, Laura E. Brown, Ashok Goel, George Luger, Jim Marshall, Andrew Neel, Todd Neller, Peter Norvig

**Poster Papers** 

11

IRobot: Teaching the Basics of Artificial Intelligence in High Schools Harald Burgsteiner, Martin Kandlhofer, Gerald Steinbauer

20

A.I. as an Introduction to Research Methods in Computer Science Raghuram Ramanujan

23

An Online Logic Programming Development Environment Christian Reotutar, Mbathio Diagne, Evgenii Balai, Edward Wertz, Peter Lee, Shao-Lon Yeh, Yuanlin Zhang

24

Using Declarative Programming in an Introductory Computer Science Course for High School Students Maritza Reyes, Cynthia Perez, Rocky Upchurch, Timothy Yuen, Yuanlin Zhang

6

Teaching Automated Strategic Reasoning Using Capstone Tournaments Oscar Veliz, Marcus Gutierrez, Christopher Kiekintveld

21

Training Watson - A Cognitive Systems Course Michael Wollowski

Model AI Assignments

Model AI Assignments 2016

Todd W. Neller, Laura E. Brown, James B. Marshall, Lisa Torrey, Nate Derbinsky, Andrew A. Ward, Thomas E. Allen, Judy Goldsmith, Nahom Muluneh

#### Senior Member

Blue Sky Papers

2787

Indefinite Scalability for Living Computation David H. Ackley

2769

Embedding Ethical Principles in Collective Decision Support Systems Joshua Greene, Francesca Rossi, John Tasioulas, Kristen Brent Venable, Brian Williams

2744

Five Dimensions of Reasoning in the Wild Don Perlis

2752

Ethical Dilemmas for Adaptive Persuasion Systems Oliviero Stock, Marco Guerini, Fabio Pianesi

Summary Talks

2762

Ontology Instance Linking: Towards Interlinked Knowledge Graphs Jeff Heflin, Dezhao Song

2756

Natural Language Processing for Enhancing Teaching and Learning Diane Litman

2754

Strategic Behaviour When Allocating Indivisible Goods Toby Walsh

2721

Rational Verification: From Model Checking to Equilibrium Checking
Michael Wooldridge, Julian Gutierrez, Paul Harrenstein, Enrico Marchioni, Giuseppe Perelli, Alexis Toumi

# **Student Abstracts**

2824

MIP-Nets: Enabling Information Sharing in Loosely-Coupled Teamwork Ofra Amir, Barbara J. Grosz, Krzysztof Z. Gajos

2845

Weighted A\* Algorithms for Unsupervised Feature Selection with Provable Bounds on Suboptimality Hiromasa Arai, Ke Xu, Crystal Maung, Haim Schweitzer

Abstraction Using Analysis of Subgames Anjon Basak

#### 2863

Bayesian Markov Games with Explicit Finite-Level Types Muthukumaran Chandrasekaran, Yingke Chen, Prashant Doshi

#### 2879

BRBA: A Blocking-Based Association Rule Hiding Method Peng Cheng, Ivan Lee, Li Li, Kuo-Kun Tseng, Jeng-Shyang Pan

### 2837

A CP-Based Approach to Popular Matching Danuta Sorina Chisca, Mohamed Siala, Gilles Simonin, Barry O'Sullivan

### 2874

Predicting Prices in the Power TAC Wholesale Energy Market Moinul Morshed Porag Chowdhury

### 2823

Robust Execution Strategies for Probabilistic Temporal Planning Sam Dietrich, Kyle Lund, James C. Boerkoel Jr.

#### 2796

A Comparison of Supervised Learning Algorithms for Telerobotic Control Using Electromyography Signals Tyler M. Frasca, Antonio G. Sestito, Craig Versek, Douglas E. Dow, Barry C. Husowitz, Nate Derbinsky

# 2821

Trust and Distrust across Coalitions: Shapley Value Based Centrality Measures For Signed Networks (Student Abstract Version)

Varun Gangal, Abhishek Narwekar, Balaraman Ravindran, Ramasuri Narayanam

#### 2810

Authorship Attribution Using a Neural Network Language Model Zhenhao Ge, Yufang Sun, Mark J. T. Smith

#### 269

Structure Aware L1-Graph for Data Clustering Shuchu Han, Hong Qin

## 2811

Multivariate Conditional Outlier Detection and Its Clinical Application Charmgil Hong, Milos Hauskrecht

# 2860

Learning Complex Stand-up Motion for Humanoid Robots Heejin Jeong, Daniel D. Lee

# 2830

Connecting the Dots Using Contextual Information Hidden in Text and Images Md Abdul Kader, Sheikh Motahar Naim, Arnold P. Boedihardjo, M. Shahriar Hossain

Monte Carlo Tree Search for Multi-Robot Task Allocation Bilal Kartal, Ernesto Nunes, Julio Godoy, Maria Gini

### 2855

Hierarchy Prediction in Online Communities Denys Katerenchuk, Andrew Rosenberg

#### 2833

Handling Class Imbalance in Link Prediction Using Learning to Rank Techniques Bopeng Li, Sougata Chaudhuri, Ambuj Tewari

### 2866

Predicting Links and Their Building Time: A Path-Based Approach Manling Li, Yantao Jia, Yuanzhuo Wang, Zeya Zhao, Xueqi Cheng

### 2817

Social Emotion Classification via Reader Perspective Weighted Model Xin Li, Yanghui Rao, Yanjia Chen, Xuebo Liu, Huan Huang

#### 2750

Two-Stream Contextualized CNN for Fine-Grained Image Classification Jiang Liu, Chenqiang Gao, Deyu Meng, Wangmeng Zuo

## 2846

Decision Sum-Product-Max Networks Mazen Melibari, Pascal Poupart, Prashant Doshi

### 2806

Iterative Project Quasi-Newton Algorithm for Training RBM Shuai Mi, Xiaozhao Zhao, Yuexian Hou, Peng Zhang, Wenjie Li, Dawei Song

#### 2795

A Word Embedding and a Josa Vector for Korean Unsupervised Semantic Role Induction Kyeong-Min Nam, Yu-Seop Kim

#### 2841

Conquering Adversary Behavioral Uncertainty in Security Games: An Efficient Modeling Robust Based Algorithm Thanh H. Nguyen, Arunesh Sinha, Milind Tambe

# 2858

Bayesian AutoEncoder: Generation of Bayesian Networks with Hidden Nodes for Features Kaneharu Nishino, Mary Inaba

# 2826

Human-Robot Trust and Cooperation through a Game Theoretic Framework Erin Paeng, Jane Wu, James C. Boerkoel Jr.

## 26

Efficient Collaborative Crowdsourcing Zhengxiang Pan, Han Yu, Chunyan Miao, Cyril Leung

SPAN: Understanding a Question with Its Support Answers Liang Pang, Yanyan Lan, Jiafeng Guo, Jun Xu, Xueqi Cheng

#### 2808

Towards Structural Tractability in Hedonic Games Dominik Peters

### 2840

Heuristic Planning for Hybrid Systems
Wiktor Piotrowski, Maria Fox, Derek Long, Daniele Magazzeni, Fabio Mercorio

### 2829

Counter-Transitivity in Argument Ranking Semantics Fuan Pu, Jian Luo, Guiming Luo

#### 2869

Discriminative Structure Learning of Arithmetic Circuits Amirmohammad Rooshenas, Daniel Lowd

#### 2809

Unsupervised Measure of Word Similarity: How to Outperform Co-Occurrence and Vector Cosine in VSMs Enrico Santus, Tin-Shing Chiu, Qin Lu, Alessandro Lenci, Chu-Ren Huang

### 2872

ROOT13: Spotting Hypernyms, Co-Hyponyms and Randoms Enrico Santus, Alessandro Lenci, Tin-Shing Chiu, Qin Lu, Chu-Ren Huang

# 2859

Abstracting Complex Domains Using Modular Object-Oriented Markov Decision Processes Shawn Squire, Marie desJardins

# 2815

Pseudo-tree Construction Heuristics for DCOPs with Variable Communication Times Atena M Tabakhi

### 2828

Image Privacy Prediction Using Deep Features Ashwini Tonge, Cornelia Caragea

## 2854

Evaluating the Robustness of Game Theoretic Solutions When Using Abstraction Oscar Veliz

# 2812

Text Simplification Using Neural Machine Translation Tong Wang, Ping Chen, John Rochford, Jipeng Qiang

# 2813

Business Event Curation: Merging Human and Automated Approaches Yiqi Wang, Huiying Ma, Nichola Lowe, Maryann Feldman, Charles Schmitt

Direct Discriminative Bag Mapping for Multi-Instance Learning Jia Wu, Shirui Pan, Peng Zhang, Xingquan Zhu

### 2727

Mobility Sequence Extraction and Labeling Using Sparse Cell Phone Data Yingxiang Yang, Peter Widhalm, Shounak Athavale, Marta C. Gonzalez

### 2743

**Epitomic Image Super-Resolution** 

Yingzhen Yang, Zhangyang Wang, Zhaowen Wang, Shiyu Chang, Ding Liu, Honghui Shi, Thomas S. Huang

#### 2856

MicroScholar: Mining Scholarly Information from Chinese Microblogs Yang Yu, Xiaojun Wan

#### 2873

Intrinsic and Extrinsic Evaluations of Word Embeddings Michael Zhai, Johnny Tan, Jinho D. Choi

### 2748

User-Centric Affective Computing of Image Emotion Perceptions Sicheng Zhao, Hongxun Yao, Wenlong Xie, Xiaolei Jiang

#### 137

Learning Structural Features of Nodes in Large-Scale Networks for Link Prediction Aakas Zhiyuli, Xun Liang, Xiaoping Zhou

# **AAAI/SIGAI Doctoral Consortium Abstracts**

# 2753

Interactive Learning and Analogical Chaining for Moral and Commonsense Reasoning Joseph A. Blass

#### 2773

Machine Learning for Computational Psychology Sarah M. Brown

#### 2764

Robust Learning from Demonstration Techniques and Tools William Curran

## 2759

Integrating Planning and Recognition to Close the Interaction Loop Richard G. Freedman

# 2776

Apprenticeship Scheduling for Human-Robot Teams Matthew C. Gombolay

# 2758

Privacy Management in Agent-Based Social Networks Nadin Kokciyan

Multi-Modal Learning over User-Contributed Content from Cross-Domain Social Media Wen-Yu Lee

### 2790

Unsupervised Learning of HTNs in Complex Adversarial Domains Michael Leece

### 2767

Estimating Text Intelligibility via Information Packaging Analysis Junyi Jessy Li

# 2785

Robust Classification under Covariate Shift with Application to Active Learning Angi Liu

# 2779

Analogical Generalization of Linguistic Constructions Clifton McFate

### 2766

Writing Stories with Help from Recurrent Neural Networks Melissa Roemmele

## 2789

Scaling-Up MAP and Marginal MAP Inference in Markov Logic Somdeb Sarkhel

### 2774

Adapting Plans through Communication with Unknown Teammates Trevor Sarratt

#### 2792

Pragmatic Querying in Heterogeneous Knowledge Graphs Amar Viswanathan

### 514

Architectural Mechanisms for Situated Natural Language Understanding in Uncertain and Open Worlds Tom Williams

# 2746

Affective Computing and Applications of Image Emotion Perceptions Sicheng Zhao, Hongxun Yao

# **What's Hot Abstracts**

# 2889

What's Hot in Human Language Technology: Highlights from NAACL HLT 2015 Joyce Y. Chai, Anoop Sarkar, Rada Mihalcea

What's Hot in the Answer Set Programming Competition Martin Gebser, Marco Maratea, Francesco Ricca

#### 2885

Inductive Logic Programming: Challenges Katsumi Inoue, Hayato Ohwada, Akihiro Yamamoto

### 2888

What's Hot in Intelligent User Interfaces
Shimei Pan, Oliver Brdiczka, Giuseppe Carenini, Duen Horng Chau, Per Ola Kristensson

#### 2886

General Video Game AI: Competition, Challenges and Opportunities
Diego Perez-Liebana, Spyridon Samothrakis, Julian Togelius, Simon M. Lucas, Tom Schaul

#### 2890

Angry Birds as a Challenge for Artificial Intelligence Jochen Renz, XiaoYu Ge, Rohan Verma, Peng Zhang

### 2882

What's Hot in Heuristic Search? Roni Stern, Levi H. S. Lelis

#### 2883

Competition of Distributed and Multiagent Planners (CoDMAP) Michal Štolba, Antonín Komenda, Daniel L. Kovacs

# 2884

What's Hot at RoboCup (Extended Abstract)
Peter Stone

# **AAAI-16 Technical Demonstrations**

#### 2653

Artificial Intelligence for Predictive and Evidence Based Architecture Design Mehul Bhatt, Jakob Suchan, Carl Schultz, Vasiliki Kondyli, Saurabh Goyal

#### 1069

co-rank: An Online Tool for Collectively Deciding Efficient Rankings among Peers Ioannis Caragiannis, George A. Krimpas, Marianna Panteli, Alexandros A. Voudouris

#### 2155

SVVAMP: Simulator of Various Voting Algorithms in Manipulating Populations François Durand, Fabien Mathieu, Ludovic Noirie

# 2712

Deploying PAWS to Combat Poaching: Game-Theoretic Patrolling in Areas with Complex Terrain (Demonstration) Fei Fang, Thanh H. Nguyen, Rob Pickles, Wai Y. Lam, Gopalasamy R. Clements, Bo An, Amandeep Singh, Milind Tambe

#### 2717

Predicting Gaming Related Properties from Twitter Accounts

Maria Ivanova Gorinova, Yoad Lewenberg, Yoram Bachrach, Alfredo Kalaitzis, Michael Fagan, Dean Carignan, Nitin Gautam

### 2738

NLU Framework for Voice Enabling Non-Native Applications on Smart Devices Soujanya Lanka, Deepika Pathania, Pooja Kushalappa, Pradeep Varakantham

### 2745

Modeling and Experimentation Framework for Fuzzy Cognitive Maps Maikel Leon Espinosa, Gonzalo Napoles Ruiz

# 2714

Using Convolutional Neural Networks to Analyze Function Properties from Images Yoad Lewenberg, Yoram Bachrach, Ian Kash, Peter Key

#### 2709

Predicting Personal Traits from Facial Images Using Convolutional Neural Networks Augmented with Facial Landmark Information

Yoad Lewenberg, Yoram Bachrach, Sukrit Shankar, Antonio Criminisi

#### 764

EKNOT: Event Knowledge from News and Opinions in Twitter

Min Li, Jingjing Wang, Wenzhu Tong, Hongkun Yu, Xiuli Ma, Yucheng Chen, Haoyan Cai, Jiawei Han

#### 2724

BBookX: Building Online Open Books for Personalized Learning

Chen Liang, Shuting Wang, Zhaohui Wu, Kyle Williams, Bart Pursel, Benjamin Brautigam, Sherwyn Saul, Hannah Williams, Kyle Bowen, C. Lee Giles

# 2729

Moodee: An Intelligent Mobile Companion for Sensing Your Stress from Social Media Postings Huijie Lin, Jia Jia, Jie Huang, Enze Zhou, Jingtian Fu, Yejun Liu, Huanbo Luan

#### 1525

Write-righter: An Academic Writing Assistant System Yuanchao Liu, Xin Wang, Ming Liu, Xiaolong Wang

#### 1531

An Image Analysis Environment for Species Identification of Food Contaminating Beetles
Daniel Martin, Hongjian Ding, Leihong Wu, Howard Semey, Amy Barnes, Darryl Langley, Su Inn Park, Zhichao Liu,
Weida Tong, Joshua Xu

#### 2726

Jikan to Kukan: A Hands-On Musical Experience in AI, Games and Art Georgia Rossmann Martins, Mário Escarce Junior, Leandro Soriano Marcolino

# 2113

WWDS APIs: Application Programming Interfaces for Efficient Manipulation of World WordNet Database Structure

Hanumant Redkar, Sudha Bhingardive, Kevin Patel, Pushpak Bhattacharyya, Neha Prabhugaonkar, Apurva Nagvenkar, Ramdas Karmali

Artificial Swarm Intelligence, a Human-in-the-loop approach to A.I. Louis Rosenberg

### 2734

Toward Interactive Relational Learning Ryan Rossi, Rong Zhou

### 516

EDDIE: An Embodied AI System for Research and Intervention for Individuals with ASD Robert Selkowitz, Jonathan Rodgers, P.J. Moskal, Jon Mrowczynski, Christine Colson

### 48

A Tool to Graphically Edit CP-nets Aidan Shafran, Sam Saarinen, Judy Goldsmith

#### 2447

A Visual Semantic Framework for Innovation Analytics Walid Shalaby, Kripa Rajshekhar, Wlodek Zadrozny

### 67

Multi-Agent System Development MADE Easy Zhiqi Shen, Han Yu, Chunyan Miao, Siyao Li, Yiqiang Chen

### 1331

A Fraud Resilient Medical Insurance Claim System Yuliang Shi, Chenfei Sun, Qingzhong Li, Lizhen Cui, Han Yu, Chunyan Miao

# 2765

DECT: Distributed Evolving Context Tree for Understanding User Behavior Pattern Evolution Xiaokui Shu, Nikolay Pavlovich Laptev, Danfeng (Daphne) Yao

### 2735

Markov Argumentation Random Fields Yuqing Tang, Nir Oren, Katia Sycara

### 995

Shoot to Know What: An Application of Deep Networks on Mobile Devices Jiaxiang Wu, Qinghao Hu, Cong Leng, Jian Cheng

### 2730

SAPE: A System for Situation-Aware Public Security Evaluation Shu Wu, Qiang Liu, Ping Bai, Liang Wang, Tieniu Tan

### 2731

Information Credibility Evaluation on Social Media Shu Wu, Qiang Liu, Yong Liu, Liang Wang, Tieniu Tan

# 1344

Productive Aging through Intelligent Personalized Crowdsourcing Han Yu, Chunyan Miao, Siyuan Liu, Zhengxiang Pan, N. Syahidah B. Khalid, Zhiqi Shen, Cyril Leung