

## Machine Learning PhD Dissertations

The following is a list of PhD dissertations available upon request from the instructor for the dissertation critique assignment. The student is free to use any of the following dissertations or any other dissertation in machine learning. Should the student choose a dissertation other than one of the dissertations below, the student must ensure that it was submitted and accepted for a doctoral degree. Masters theses are not acceptable. In addition, the student must obtain approval from the instructor and provide the instructor with access to an electronic version of the dissertation.

### 2019

- Agrawal, Rakshit, Generalized Learning Models for Structured Data, University of California Santa Cruz, 2019.
- Azizzadenesheli, Kamyar, Reinforcement Learning in Structured and Partially Observable Environments, University of California Irvine, 2019.
- Bose, Sourabh, Learning Representations Using Reinforcement Learning, University of Texas at Arlington, 2019.
- Fazelnia, Ghazal, Optimization for Probabilistic Machine Learning, Columbia University, 2019.
- Jin, Chi, Machine Learning: Why Do Simple Algorithms Work So Well?, University of California Berkeley, 2019.
- Karan, Subhadeep, High Performance Algorithms for Exact Structure Learning of Bayesian Networks, University of Buffalo, 2019.
- Rostami, Mohammad, Learning Transferable Knowledge through Embedding Spaces, University of Pennsylvania, 2019.

### 2018

- Butcher, Stephyn G. W., Information Exchange and Conflict Resolution in Particle Swarm Optimization Variants, Johns Hopkins University, 2018.
- Don, Janith N. A. H. P, Learning and Reasoning with Imperfect Data, University of Miami, 2018.
- Gligorijevic, Jelena, Context-Award Learning from Partial Observations Temple University, 2018.
- Johnson, Tyler B., Scaling Machine Learning via Prioritized Optimization, University of Washington, 2018.
- Makhzani, Alireza, Unsupervised Representation learning with Autoencoders, University of Toronto, 2018.
- Sahs, Justin C., Bayesian Nonparametric Probabilistic Methods in Machine Learning, The University of Texas at Dallas, 2018.
- Schnabel, Tobias Benjamin, Improving Machine Learning Beyond the Algorithm, Cornell University, 2018.
- St. Amand, Joseph, Learning to Measure: Distance Metric Learning with Structured Sparsity, University of Kansas, 2018.

## 2017

- Iyer, Mohit, Discourse-Level Language Understanding with Deep Learning, University of Maryland, College Park, 2017.
- Lim, Daryl Kah Hian, Learning to Rank for Retrieval and Recommendation, University of California, San Diego, 2017.
- Livezey, Jesse, Learning and Inferring Representations of Data in Neural Networks, University of California, Berkeley, 2017.
- Mathieu, Michael, Unsupervised Learning Under Uncertainty, New York University, 2017.
- Mitchell, Benjamin, The Spatial Inductive Bias of Deep Learning, The Johns Hopkins University, 2017.
- Sharma, Manali, Active Learning with Rich Feedback, Illinois Institute of Technology, 2017.
- Xu, Jianpeng, Multi-Task Learning and Its Application to Geospatial-Temporal Data, Michigan State University, 2017.
- Zhao, Yijun, Addressing Bias and Subjectivity in Machine Learning, Tufts University, 2017.

## 2016

- Andrew, Galen, New Techniques in Deep Representation Learning, University of Washington, 2016.
- Iandola, Forrest, Exploring the Design Space of Deep Convolutional Neural Networks at Large Scale, University of California, Berkeley, 2016.
- Lo, Henry Z., Deep Networks: Applications, Interpretability, and Optimization, University of Massachusetts, Boston, 2016.
- Luo, Haipeng, Optimal and Adaptive Online Learning, Princeton University, 2016.
- McQuade, Scott, Algorithms for Learning from Spatiotemporal Data, The George Washington University, 2016.
- Sangari, Arash, Efficient Algorithms for Dictionary Learning and Feature Extraction, University of Wisconsin-Madison, 2016.
- Shao, Ming, Efficient Transfer Feature Learning and Its Applications on Social Media, Northeastern University, 2016.
- Strasser, Shane, Factored Evolutionary Algorithms: Cooperative Coevolutionary Optimization with Overlap, Montana State University, 2016.
- Torkamani, Mohamadali, Robust Large Margin Approaches for Machine Learning in Adversarial Settings, University of Oregon, 2016.
- Tosun, Hasari, Efficient Machine Learning Using Partitioned Restricted Boltzmann Machines, Montana State University, 2016.
- Zigic, Ljiljana, Direct L2 Support Vector Machine, Virginia Commonwealth University, 2016.

## 2015

- Bleich, Justin, Extensions and Applications of Ensemble-of-Trees Methods in Machine Learning, University of Pennsylvania, 2015.
- Donnelly, Patrick, Learning Spectral Features for Single- and Multi-Label Classification of Musical Instruments, Montana State University, 2015.
- Fortier, Nathan, Inference and Learning in Bayesian Networks Using Overlapping Swarm Intelligence, Montana State University, 2015.
- Humphry, Eric J., An Exploration of Deep Learning in Content-Based Music Informatics, New York University, 2015.
- Janofsky, Eric, Exponential Series Approaches for Nonparametric Graphical Models, University of Chicago, 2015.
- Kabbur, Santosh, Machine Learning Methods for Recommender Systems, The University of Minnesota, 2015.
- London, Benjamin A., On the Stability of Structured Prediction, University of Maryland College Park, 2015.
- Lu, Yichao, Fast Linear Algorithms for Machine Learning, University of Pennsylvania, 2015.
- Marivate, Vukosi, Improved Empirical Methods in Reinforcement-Learning Evaluation, Rutgers, The State University of New Jersey, 2015.
- O'Leary, Daniel A., Artificial Neural Network for Optimized Power System Management, University of California Santa Cruz, 2015.
- Nath, Aniruddh, Learning and Exploiting Relational Structure for Efficient Inference, University of Washington, 2015.
- Park, Young Woong, Optimization for Regression, PCA, and SVM: Optimality and Scalability, Northwestern University, 2015.
- Paul, Saurabh, Matrix Sampling Algorithms for Topics in Machine Learning, Rensselaer Polytechnic Institute, 2015. Refaat, Khaled, Decomposition Techniques for Learning Graphical Models, University of California Los Angeles, 2015.
- Tan, Kean Ming, Graph Estimation and Cluster Analysis in High Dimensions, University of Washington, 2015.

## 2014

- Eis, David, Machine Learning on Graphs, Princeton University, 2014.
- Foulds, James, Latent Variable Modeling for Networks and Text: Algorithms, Models and Evaluation Techniques, University of California Irvine, 2014.
- Khot, Tushar, Efficient Learning of Statistical Relational Models, University of Wisconsin – Madison, 2014.
- Mahdavi, Mehrdad, Exploiting Smoothness in Statistical Learning, Sequential Prediction, and Stochastic Optimization, Michigan State University, 2014.
- Rivera, Abner, Multi-Output Structure Learning, University of Illinois at Urbana-Champaign, 2014.
- Sattigeri, Prasanna S., Exploring Latent Structure in Data: Algorithms and Implementations, Arizona State University, 2014.

- Scott, Jeffrey, Computational Modeling and Analysis of Multi-timbral Musical Instrument Mixtures, Drexel University, 2014.
- Soufiani, Hossein, Revisiting Random Utility Models, Harvard University, 2014.
- Wang, Huahua, Large Scale Optimization for Machine Learning, The University of Minnesota, 2014.
- Wright, Robert, Scaling Reinforcement Learning through Better Representation and Sample Efficiency, Binghamton University, 2014.

## 2013

- Chin, Gillian, Nonlinear Optimization Algorithms for Large-Scale Machine Learning, Northwestern University, 2013.
- Farhangfar, Alireza, Novel Machine Learning Algorithms, University of Alberta, 2013.
- Kapicioglu, Berk, Applications of Machine Learning to Location Data, Princeton University, 2013.
- Migdady, Hazem, A Feature Extraction Wrapper Method for Neural Networks, with Application to Data Mining and Machine Learning, Southern Illinois University Carbondale, 2013.
- Qin, Zhiwei, Optimization Algorithms for Structured Machine Learning and Image Processing Problems, Columbia University, 2013.
- Saha, Ankan, Optimization Methods in Machine Learning: Theory and Applications, University of Chicago, 2013.
- Sultanov, Hakim, Application of Swarm and Reinforcement Learning Techniques to Requirements Tracing, University of Kentucky, 2013.
- Trapeznikov, Kirill, Machine Learning on a Budget, Boston University, 2013.
- Waters, Andrew E., Bayesian Methods for Learning Analytics with Applications, Rice University, 2013.
- Wu, Tingfau, Machine Learning for Humanoid Robot Modeling and Control, University of California, San Diego, 2013.
- Xu, Hao, Applications of Machine Learning to fMRI Data Analysis, Princeton University, 2013.

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- Agarwal, Arvind, Geometric Methods in Machine Learning and Data Mining, University of Maryland, 2012.
- Ambati, Vamshi, Active Learning and Crowdsourcing for Machine Translation in Low Resource Scenarios, Carnegie Mellon University, 2012.
- Kleiner, Ariel, Randomized Algorithms for Scalable Machine Learning, University of California, Berkeley, 2012.
- Lee, Dong, A Distributed Kernel Summation Framework for Machine Learning and Scientific Applications, Georgia Institute of Technology, 2012.
- Lie, Wei, Large-Scale Machine Learning for Classification and Search, Columbia University, 2012.
- Lu, Yibiao, Statistical Methods with Applications to Machine Learning and Artificial Intelligence, Georgia Institute of Technology, 2012.
- McFee, Brian, More Like This: Machine Learning Approaches to Music Similarity, University of California, San Diego, 2012.

- Singh, Anshuman, On Concept Drift, Deployability, and Adversarial Selection in Machine Learning-Based Malware Detection, University of Louisiana at Lafayette, 2012.
- Vig, Jesse, Intelligent Tagging Systems: Machine Learning for Novel Interaction, University of Minnesota, 2012.

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- Balashandran, Prakash, Dimensionality Reduction and Learning on Networks, Duke University, 2011.
- Brady, Bryan, Automatic Term-Level Abstraction, University of California, Berkeley, 2011.
- Chee, Brant, Exploring Machine Learning Techniques using Patient Interactions in Online Health Forums to Classify Drug Safety, University of Illinois at Urbana-Champaign, 2011.
- Chen, Jianhui, Multi-Task Learning via Structured Regularization: Formulations, Algorithms, and Applications, Arizona State University, 2011.
- Lintean, Mihai, Measuring Semantic Similarity: Representations and Methods, University of Memphis, 2011.
- Masnadi-Shirazi, Hamed, The Design of Bayes Consistent Loss Functions for Classification, University of California, San Diego, 2011.
- Mirowski, Piotr, Time Series Modeling with Hidden Variables and Gradient-Based Algorithms, New York University, 2011.
- Mukherjee, Indraneel, Game Theory and Optimization in Boosting, Princeton University, 2011.
- Nouri, Ali, Efficient Model-Based Exploration in Continuous State-Space Environments, Rutgers, The State University of New Jersey, 2011.
- Pansombut, Tatdow, Advanced Learning Techniques for Improved Inference of Bayesian Belief Networks from Uncertain and High-Dimensional Data, North Carolina State University, 2011.
- Raj, Anil, Large Scale Machine Learning in Biology, Columbia University, 2011.
- Shao, Bo, User-Centric Music Information Retrieval, Florida International University, 2011.
- Valko, Michal, Adaptive Graph-Based Algorithms for Conditional Anomaly Detection and Semi-Supervised Learning, University of Pittsburgh, 2011.
- Zheng, Yaling, Machine Learning with Incomplete Information, University of Nebraska, 2011.

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- Abu-Halaweh, Na'el, Integrating Information Theory Measures and a Novel Rule Set Reduction Technique to Improve Fuzzy Decision Tree Induction Algorithms, Georgia State University, 2010.
- Carlson, Andrew, Coupled Semi-Supervised Learning, Carnegie Mellon University, 2010.
- Erhan, Dumitru, Understanding Deep Architectures and the Effect of Unsupervised Pre-training, University of Montreal, 2010.
- Gilbert, Robin, Unconstrained Learning Machines University of Oklahoma, 2010.
- Goldberg, Andrew, New Directions in Semi-Supervised Learning, University of Wisconsin-Madison, 2010.
- Gutstein, Steven, Transfer Learning Techniques for Deep Neural Networks, University of Texas at El Paso, 2010.

- Herbert, Joseph, Investigating Machine Learning Decision Problems with Game Theory, University of Regina, 2010.
- Hoffman, Matthew, Probabilistic Graphical Models for the Analysis and Synthesis of Musical Audio, Princeton University, 2010.
- Hsu, Daniel, Algorithms for Active Learning, University of California, San Diego, 2010.
- Jones, Joshua, Empirically-Based Self-Diagnosis and Repair of Domain Knowledge, Georgia Institute of Technology, 2010.
- Kirby, James, Cue Selection and Category Restructuring in Sound Change, University of Chicago, 2010.
- Lowd, Daniel, Efficient Learning and Inference in Rich Statistical Representations, University of Washington, 2010.
- McShane, Blakeley, Machine Learning Methods with Time Series Dependence, University of Pennsylvania, 2010.
- Nelson, Blaine, Behavior of Machine Learning Algorithms in Adversarial Environments, University of California, Berkeley, 2010.
- Park, WonKyung, Information Theoretic Measure Applied on Learning Classifier Systems for Speaker Identification Problems, Syracuse University, 2010.
- Ray, Soumi, Discovering and Characterizing Hidden Variables in Streaming Multivariate Time Series, University of Maryland Baltimore County, 2010.
- Reid, Samuel, Model Combination in Multiclass Classification, University of Colorado, 2010.
- Syed, Umar, Reinforcement Learning Without Rewards, Princeton University, 2010.
- Tang, Yan, Towards Building Effective Predictive Model in Software Engineering: A Bayesian Belief Network Based Approach, University of Texas at Dallas, 2010.
- Walshi, Thomas, Efficient Learning of Relational Models for Sequential Decision Making, Rutgers, The State University of New Jersey, 2010.
- Wasser, Carlos, An Object-Oriented Representation for Efficient Reinforcement Learning, Rutgers, The State University of New Jersey, 2010.
- Whitehead, Matthew, Creating Fast and Accurate Machine Learnign Ensembles through Training Dataset Preprocessing, Indiana University, 2010.
- Xu, Jing, A Continuous Time Bayesian Network Approach for Intrusion Detection, University of California, Riverside, 2010.

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- Bao, Xinlong, Applying Machine Learning for Prediction, Recommendation, and Integration Oregon State University, 2009.
- Bloodgood, Michael, Active Learning with Support Vector Machines for Imbalanced Datasets and a Method for Stopping Active Learning Based on Stabilizing Predictions, University of Delaware, 2009.
- Carter, Kevin, Dimensionality Reduction on Statistical Manifolds, The University of Michigan, 2009.
- Cui, Ying, Non-Redundant Clustering, Principal Feature Selection and Leraning Methods Applied to Lung Tumor Image-Guided Radiotherapy, Northeastern University, 2009

- Dredze, Mark, Intelligent Email: Aiding Users with AI, University of Pennsylvania, 2009.
- Eaton, Eric, Selective Knowledge Transfer for Machine Learning, University of Maryland Baltimore County, 2009.
- Hao, Guohua, Efficient Training and Feature Induction in Sequential Supervised Learning, Oregon State University, 2009.
- Hofling, Holger, Topics in Statistical Learning, Stanford University, 2009.
- Hutchinson, Rebecca, Hidden Process Models, Carnegie Mellon University, 2009.
- Jiang, Wenxin, Polyphonic Music Information Retrieval Based on Multi-Label Cascade Classification System, University of North Carolina at Charlotte, 2009.
- Kolta, Michael, Machine Learned Melody Matching using Strictly Relative Musical Abstractions, State University of New York, Albany, 2009.
- Ligett, Katrina, A Learning Perspective on Selfish Behavior in Games, Carnegie Mellon University, 2009.
- Lim, Shiao Hong, Explanation-Based Feature Construction, University of Illinois at Urbana-Champaign, 2009.
- Liu, Yinyin, Hierarchical Self-Organizing Learning Systems for Embodied Intelligence, Ohio University, 2009.
- Napolitano, Amri, Classification Techniques for Noisy and Imbalanced Data, Florida Atlantic University, 2009.
- Osentoski, Sarah, Action-Based Representation Discovery in Markov Decision Processes, University of Massachusetts, Amherst, 2009.
- Proper, Scott, Scaling Multiagent Reinforcement Learning, Oregon State University, 2009.
- Raina, Rajat, Self-Taught Learning, Stanford University, 2009.
- Song, Guohui, Approximation of Kernel Matrices in Machine Learning, Syracuse University, 2009.
- Ting, Jo-Anne S. Y., Bayesian Methods for Autonomous Learning Systems, University of Southern California, 2009.
- Torrey, Lisa, Relational Transfer in Reinforcement Learning, University of Wisconsin-Madison, 2009.
- Vural, Volkan, Improving Large Margin Classifiers using Relationships Among Samples, Northeastern University, 2009.
- Wellner, Ben, Sequence Models and Ranking Methods for Discourse Processing, Brandeis University, 2009.
- Zhang, Jingdan, Object Detection and Segmentation Using Discriminative Learning, University of North Carolina at Chapel Hill, 2009.

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- Abbeel, Pieter, Apprenticeship Learning and Reinforcement Learning with Applications to Robotic Control, Stanford University, 2008.
- Balcan, Maria-Florina, New Theoretical Frameworks for Machine Learning, Carnegie Mellon University, 2008.

- Barreno, Marco, Evaluating the Security of Machine Learning Algorithms, University of California Berkeley, 2008.
- Bean, Kathryn, Supervised and Unsupervised Machine Learning for Pattern Recognition and Time Series Prediction, The University of Texas at Dallas, 2008.
- Bourke, Christopher, Contributions to Computational Complexity and Machine Learning: Unambiguity in Log-Space Computations and Reoptimizing Multi-Class Classifiers, University of Nebraska, 2008.
- Cattral, Robert, Automatic Rule Discovery and Generalization in Supervised and Unsupervised Learning Tasks, Carleton University, 2008
- Chen, Hung-Ching, Reverse Engineering a Hidden Markov Model for Complex Social Systems, Rensselaer Polytechnic Institute, 2008.
- Ganiz, Murat Can, Higher-Order Path Analysis for Supervised Machine Learning, Lehigh University, 2008.
- Holness, Gary, A Statistical Approach to Improving Accuracy in Classifier Ensembles, University of Massachusetts Amherst, 2008.
- Kim, Minyoung, Discriminative Methods and Dimensionality Reduction for Regression, Rutgers, The State University of New Jersey, 2008.
- Kondor, Imre Risi, Group Theoretical Methods in Machine Learning, Columbia University, 2008.
- Kulis, Brian Joseph, Scalable Kernel Methods for Machine Learning, The University of Texas at Austin, 2008.
- Kunapuli, Gautam, A Bilevel Optimization Approach to Machine Learning, Rensselaer Polytechnic Institute, 2008.
- Langlois, Robert E., Machine Learning in Bioinformatics: Algorithms, Implementations and Applications, University of Illinois at Chicago, 2008.
- LI, Su-In, Machine Learning Approaches to Understanding the Genetic Basis of Complex Traits, Stanford University, 2008.
- Mahmud, M. M. Hassan, Universal Transfer Learning, University of Illinois at Urbana-Champaign, 2008.
- Marcu, Dorin, Learning of Mixed-Initiative Human-Computer Interaction Models, George Mason University, 2008.
- Morris, Gary, Active Error Correction for Learning Kinship Terms, University of Pennsylvania, 2008.
- Petrovic, Smiljana, Learning to Combine Heuristics to Solve Constraint Satisfaction Problems, The City University of New York, 2008.
- Russell, Brian, Learning-Based Route Management in Wireless Ad Hoc Networks, Rutgers, The State University of New Jersey, 2008.
- Settles, Burr, Curious Machines: Active Learning with Structured Instances, University of Wisconsin-Madison, 2008.
- Singliar, Tomas, Machine Learning Solutions for Transportation Networks, University of Pittsburgh, 2008.
- Stronger, Daniel Adam, Autonomous Sensor and Action Model Learning for Mobile Robots, The University of Texas at Austin, 2008.



- Su, Xiaoyuan, Collaborative Filtering Using Machine Learning and Statistical Techniques, Florida Atlantic University, 2008.
- Tandon, Guarav, Machine Learning for Host-Based Anomaly Detection, Florida Institute of Technology, 2008.
- Taylor, Matthew, Autonomous Inter-Task Transfer in Reinforcement Learning Domains, University of Texas at Austin, 2008.
- Vatsavai, Ranga Raju, Machine Learning Algorithms for Spatio-Temporal Data Mining, University of Minnesota, 2008.
- Wild, Edward W., Optimization-Based Machine Learning and Data Mining, University of Wisconsin-Madison, 2008.
- Zheng, Zhaohui, A Regression Framework for Learning to Rank in Web Information Retrieval, State University of New York at Buffalo, 2008.
- Zhou, Ding, Mining Social Documents and Networks, The Pennsylvania State University, 2008.

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- Andrews, Stuart, Learning from Ambiguous Examples, Brown University, 2007.
- Balakrishnan, Suhrid, Classifiers of Massive and Structured Data Problems: Algorithms and Applications, Rutgers, The State University of New Jersey, 2007.
- Frome, Andrea Lynn, Learning Distance Functions for Exemplar-Based Object Recognition, University of California Berkeley, 2007.
- Kou, Zhenzhen, Stacked Graphical Learning for Text Mining, Carnegie Mellon University, 2007.
- Menke, Joshua E., Improving Machine Learning through Oracle Learning, Brigham Young University, 2007.
- Ozgencil, Necati Ercan, Cluster Based Classification for Semantic Role Labeling, Syracuse University, 2007.
- Palmer, Victor, Scaling Reinforcement Learning to the Unconstrained Multi-Agent Domain, Texas A&M University, 2007.
- Tan, Feng, Improving Feature Selection Techniques for Machine Learning, Georgia State University, 2007.
- Zhong, Mingyu, An Analysis of Misclassification Rates for Decision Trees, University of Central Florida, 2007.

## 2006

- Cassella, Vincent A., A Clustering and Principal Component Approach to Exemplar Based Machine Learning for Classification Identification, The Catholic University of America, 2006.
- Ewert, Kevin, An Adaptive Machine Learning Approach to Knowledge Discovery in Large Datasets, Nova Southeastern University, 2006.
- Fan, Xiaodong, Learning a Hierarchy of Classifiers for Multi-Class Shape Detection, The Johns Hopkins University, 2006.
- Gao, Yunchuan, Multi-Category Support Vector Machines, Syracuse University, 2006.

- Giles, Kendall E., Knowledge Discovery in Computer Network Data: A Security Perspective, The Johns Hopkins University, 2006.
- Lewis, Darrin P., Combining Kernels for Classification, Columbia University, 2006.
- Li, Ling, Data Complexity in Machine Learning and Novel Classification Algorithms, California Institute of Technology, 2006.
- Liu, Ting, Fast Nonparametric Machine Learning Algorithms for High-Dimensional Massive Data and Applications, Carnegie Mellon University, 2006.
- Mann, Gideon S., Multi-Document Statistical Fact Extraction and Fusion, The Johns Hopkins University, 2006.
- Marthi, Bhaskara Mannar, Concurrent Hierarchical Reinforcement Learning, University of California Berkeley, 2006.
- Powers, Rob, Multi-Agent Learning: The Agent Centric Agenda, Stanford University, 2006.
- Riehl, Katrina, Data Mining Logic Explanations from Numerical Data, The University of Texas at Dallas, 2006.
- Sajama, Nonparametric Methods for Learning from Data, University of California San Diego, 2006.
- Satyanarayana, Ashwin, Data Mining for Large Datasets: Intelligent Sampling and Filtering, State University of New York at Albany, 2006.
- Smith, Noah Ashton, Novel Estimation Methods for Unsupervised Discovery of Latent Structure in Natural Language Text, The Johns Hopkins University, 2006.
- Wu, Gang, Large-Scale Machine Learning Using Kernel Methods, University of California Santa Barbara, 2006.
- Yao, Jian, Developing Machine Learning Techniques for Real World Applications, Binghamton University, 2006.
- Yacoub, Francois, Learning from Data Using Latent Variable Methods, McMaster University, 2006.
- Zhang, Yi, Constructive and Destructive Optimization Methods for Predictive Ensemble Learning, The University of Iowa, 2006.
- Zhu, Xuejun, Anomaly Detection through Statistics-Based Machine Learning for Computer Networks, The University of Arizona, 2006.
- Zimak, Dav Arthur, Algorithms and Analysis for Multi-Category Classification, University of Illinois at Urbana-Champaign, 2006.

## 2005

- Downs, Oliver B., Learning, Adaptation, & Optimization: The Nonnegative Boltzmann Machine and the Tunneling Salesman Problem, Princeton University, 2005.
- Duan, Baofu, Iterative Feature Weighting for Identification of Relevant Features in Machine Learning: With Multilayer Perceptron, Radial Basis Function and Support Vector Architectures, Case Western Reserve University, 2005.
- Niculescu, Radu Stefan, Exploiting Parameter Domain Knowledge for Learning in Bayesian Networks, Carnegie-Mellon University, 2005.
- Nudelman, Eugene, Empirical Approach to the Complexity of Hard Problems, Stanford University, 2005.

- Riley, Patrick, Coaching: Learning and Using Environment and Agent Models for Advice, Carnegie-Mellon University, 2005.
- Silva, Ricardo, Automatic Discovery of Latent Variable Models, Carnegie-Mellon University, 2005.

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- Abdel-Razek, Mohammed, Multi-Agent Approach Towards Intelligent E-Learning System, University of Montreal, 2004.
- Alexe, Sorin, Learning Binary Functions: Combinatorial Prognosis and Diagnosis, Rutgers, The State University of New Jersey, 2004.
- Arsenio, Artur Miguel, Cognitive-Developmental Learning for a Humanoid Robot: A Caregiver's Gift, Massachusetts Institute of Technology, 2004.
- Bagnell, J. Andrew, Learning Decisions: Robustness, Uncertainty, and Approximation, Robotics Institute, Carnegie-Mellon University, 2004.
- Bartsch, Mark A., Automatic Singer Identification in Polyphonic Music, The University of Michigan, 2004.
- Birattaru, Mauro, The Problem of Tuning Metaheuristics as Seen from a Machine Learning Perspective, Université Libre de Bruxelles, 2004.
- Blei, David Meir, Probabilistic Models of Text and Images, University of California Berkeley, 2004.
- Butz, Martin Volker, Rule-Based Evolutionary Online Learning Systems: Learning Bounds, Classification, and Prediction, University of Illinois at Urbana-Champaign, 2004.
- Caragea, Doina, Learning Classifiers from Distributed, Semantically Heterogeneous, Autonomous Data Sources, Iowa State University, 2004.
- Ding, Beiyong, Methods for Analyzing High Dimensional Data: Classification, Measurement Error Model and Graph Based Association Measures, With Applications to Microarray Data, Harvard University, 2004.
- Elidan, Gal, Learning Hidden Variables in Probabilistic Graphical Models, The Hebrew University, 2004.
- Gaffney, Scott John, Probabilistic Curve-Aligned Clustering and Prediction with Regression Mixture Models, University of California, Irvine, 2004.
- Hooker, Giles, Diagnostics and Extrapolation in Machine Learning, Stanford University, 2004.
- Kamm, Teresa M., Active Learning for Acoustic Speech Recognition Modeling, The Johns Hopkins University, 2004.
- Kim, Hyunsoo, Machine Learning and Bioinformatics, University of Minnesota, 2004.
- Komarek, Paul, Logistic Regression for Data Mining and High-Dimensional Classification, Carnegie-Mellon University, 2004.
- Laud, Adam Daniel, Theory and Application of Reward Shaping in Reinforcement Learning, University of Illinois, Urbana-Champaign, 2004.
- Lichodziejewski, Peter, Cascaded GP Models for Data Mining, Dalhousie University, 2004.
- Nahm, Un Yong, Text Mining with Information Extraction, University of Texas at Austin, 2004.

- Richardson, Matthew, Learning and Inference in Collective Knowledge Bases, University of Washington, 2004.
- Ruan, Yongshao, Efficient Inference: A Machine Learning Approach, University of Washington, 2004.
- Sarigul, Erol, Interactive Machine Learning for Refinement and Analysis of Segmented CT/MRI Images, Virginia Polytechnic Institute and State University, 2004.
- Srebro, Nathan, Learning with Matrix Factorizations, Massachusetts Institute of Technology, 2004.
- Swamy, Chaitanya, Approximation Algorithms for Clustering Problems, Cornell University, 2004.
- Tasker, Ben, Learning Structured Prediction Models: A Large Margin Approach, Stanford University, 2004.

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- Bowling, Michael, Multiagent Learning in the Presence of Agents with Limitations, Carnegie-Mellon University, 2003.
- Daw, Nathaniel D., Reinforcement Learning Models of the Dopamine System and Their Behavioral Implications, Carnegie-Mellon University, 2003.
- Frey, Lewis James, Augmented Naive Bayesian Model for Classification Learning, Vanderbilt University, 2003.
- Hamerly, Gregory James, Learning Structure and Concepts in Data through Data Clustering, University of California, San Diego, 2003.
- Kayaalp, Mehmet M., Learning Dynamic Bayesian Network Structures from Data, University of Pittsburgh, 2003.
- Mahoney, Matthew Vincent, A Machine Learning Approach to Detecting Attacks by Identifying Anomalies in Network Traffic, Florida Institute of Technology, 2003.
- Margaritis, Dimitris, Learning Bayesian Network Model Structure from Data, Carnegie-Mellon University, 2003.
- Moraleda, Jorge, New Algorithms, Data Structures, and User Interfaces for Machine Learning of Large Datasets with Applications, Stanford University, 2003.
- Pollastri, Gianluca, A Machine Learning Approach to Protein Structure Prediction, University of California, Irvine, 2003.
- Rohwer, Judd, Machine Learning Methods for CDMA Power Control and Direction of Arrival Estimation, University of New Mexico, 2003.
- Roy, Nicholas, Finding Approximate POMDP Solutions Through Believe Compression, Carnegie-Mellon University, 2003.
- Wicentowski, Richard, Modeling and Learning Multilingual Inflectional Morphology in a Minimally Supervised Network, The Johns Hopkins University, 2003.
- Zadrozny, Bianca, Policy Mining: Learning Decision Policies from Fixed Sets of Data, University of California, San Diego, 2003.
- Zemke, Stefan, Data Mining for Prediction: Financial Series Case, The Royal Institute of Technology, Sweden, 2003.

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- Alwazzi, Samir A., Robust Optimization in Support Vector Machines and Applications, University of Oklahoma, 2002.
- Anderson, Corin, A Machine Learning Approach to Web Personalization, University of Washington, 2002.
- Boyen, Xavier, Inference and Learning in Complex Stochastic Processes, Stanford University, 2002.
- Breimer, Eric Allen, A Machine Learning Approach to Designing Dynamic Programming Algorithms, Rensselaer Polytechnic Institute, 2002.
- Chan, Kwokleung, Bayesian Learning in Classification and Density Estimation, University of California San Diego, 2002.
- Csato, Lehel, Gaussian Processes: Iterative Sparse Approximations, Aston University, 2002.
- Duff, Michael O'Gordon, Optimal Learning: Computational Procedures for Bayes-Adaptive Markov Decision Processes, University of Massachusetts, Amherst, 2002.
- Finton, David J., Cognitive Economy and the Role of Representation in On-Line Learning, University of Wisconsin, Madison, 2002.
- Ge, Xianping, Segmental Semi-Markov Models and Applications to Sequence Analysis, University of California, Irvine, 2002.
- Jebara, Tony, Discriminative, Generative, and Imitative Learning, Massachusetts Institute of Technology, 2002.
- Margineanty, Dragos Dorin, Methods for Cost-Sensitive Learning, Oregon State University, 2002.
- Murphy, Kevin Patrick, Dynamic Bayesian Networks: Representation, Inference, and Learning, University of California, Berkeley, 2002.
- Nikovski, Daniel, State-Aggregation Algorithms for Learning Probabilistic Models for Robot Control, Carnegie-Mellon University, 2002.
- Pavlov, Dmitry Yurievich, Probabilistic Query Models for Transaction Data, University of California, Irvine, 2002.
- Pfleger, Karl R., Online Learning of Predictive Compositional Hierarchies, Stanford University, 2002.
- Price, Robert Roy, Accelerating Reinforcement Learning through Imitation, The University of British Columbia, 2002.
- Sallans, Brian, Reinforcement Learning for Factored Markov Decision Processes, University of Toronto, 2002.
- Uther, William T. B., Tree-Based Hierarchical Reinforcement Learning, Carnegie-Mellon University, 2002.

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- Berger, Adam, Statistical Machine Learning for Information Retrieval, Carnegie-Mellon University, 2001.
- Cho, Junghoo, Crawling the Web: Discovery and Maintenance of Large-Scale Web Data, Stanford University, 2001.
- Getoor, Lise, Learning Statistical Models from Relational Data, Stanford University, 2001.

- Jensen, Mikkel T., Robust and Flexible Scheduling with Evolutionary Computation, University of Aarhus, 2001.
- Kalai, Adam, Probabilistic and On-Line Methods in Machine Learning, Carnegie-Mellon University, 2001.
- Khiripet, Noppadon, An Architecture for Intelligent Time Series Prediction with Causal Information, Georgia Institute of Technology, 2001.
- Li, Jinyan, Mining Emerging Patterns to Construct Accurate and Efficient Classifiers, University of Melbourne, 2001.
- Livingston, Gary Ray, A Framework for Autonomous Knowledge Discovery from Databases, University of Pittsburgh, 2001.
- Olszewski, Robert T., Generalized Feature Extraction for Structural Pattern Recognition in Time-Series Prediction, Carnegie-Mellon University, 2001.
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