

Exhibit 2

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
NORFOLK DIVISION**

I/P ENGINE, INC.

Plaintiff,

v.

AOL, INC., *et al.*,

Defendants.

Civil Action No. 2:11-cv-512

DEFENDANTS' IDENTIFICATION OF EXPERT WITNESSES

Defendants AOL, Inc., Google Inc., IAC Search & Media, Inc., Target Corp., and Gannett Co., Inc. (collectively "Defendants"), by counsel, provide the following list of expert witnesses:

1. Lyle Ungar, Ph.D.

Address: Computer & Information Science Department
University of Pennsylvania
504 Levine, 200 S. 33rd St., Philadelphia, PA 19104-6309

Occupation: Professor

Field of Expertise: Computer science, information retrieval and filtering, and text mining.

Dr. Ungar may testify about the background of search engines, content-based filtering, and collaborative filtering. Dr. Ungar may additionally testify about the level of ordinary skill in the field of the Asserted Patents, the knowledge possessed by a person of ordinary skill in this field, the prior art to the Asserted Patents, the invalidity of the Asserted Patents based on the prior art, and the invalidity of the Asserted Patents based on indefiniteness, lack of enablement, and/or lack of written description. Dr. Ungar's CV is attached hereto as Exhibit A.

Dated: June 18, 2012

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EXHIBIT A

Lyle H. Ungar

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<http://www.cis.upenn.edu/~ungar>

Education

1979-84	<i>Massachusetts Institute of Technology</i> PhD in Chemical Engineering	Boston, MA
1975-79	<i>Stanford University</i> BS in Chemical Engineering (with distinction).	Stanford, CA

Experience

1990-2012	<i>University of Pennsylvania</i> Associate Professor of Computer and Information Science Associate Professor of Chemical and Biomolecular Engineering Associate Professor of Bioengineering (2010-12) Associate Professor of Electrical and Systems Engineering (1996-2012) Associate Professor of Operations and Information Management, Wharton (2000-12) Associate Professor of Genomics and Computational Biology, SOM (2002-12)	Philadelphia, PA
2007	<i>Google</i> (on leave)	New York, NY
1999	<i>CMU</i> (sabbatical)	Pittsburgh, PA
1984-90	<i>University of Pennsylvania</i> Assistant Professor of Chemical Engineering Assistant Professor of Computer and Information Science (1987-90)	Philadelphia, PA
1982 (summer)	<i>Boston Consulting Group</i> Associate: Strategic business analysis.	Boston, MA
1979 (summer)	<i>Shell Oil</i> , Westhollow Research Center Engineer: Developed computer model for catalytic cracking plant.	Houston, TX
1976-78 (summers)	<i>Chevron USA</i> , Richmond Refinery Design Engineer (three summer co-op program).	Richmond, CA

Awards

- Presidential Young Investigator
- National Science Foundation (NSF) Graduate Fellow
- F.E. Terman Award

Research interests

Machine Learning and Database Mining

- *Methods*: machine learning, data mining, text mining
- *Applications*: information extraction, recommender systems, computational biology

Recent Administration at Penn

- Assoc. Director of the Penn Center for Bioinformatics (PCBI) (2004-12)
- Executive Committee, Genomics and Computational Biology (2002-8)
- Admissions Committee, Genomics and Computational Biology (2002-4)
- Director, Executive Masters in Technology Management (EMTM), SEAS and Wharton (1996-2004)
- Director, CIS Graduate Admissions (2000-2)

Public Service

Conferences Chaired

- International Conference on Knowledge Discovery and Data Mining (ACM SIG-KDD), 2006.
- Gordon Research Conference on Statistics in Chemistry and Chemical Engineering, 1997.

Associate Editor

- Journal of Machine Learning Research

Program committees served on (last three years only)

- American Association for Artificial Intelligence (AAAI)
- ACM Knowledge Discovery and Data Mining (KDD)
- World Wide Web (WWW)
- IEEE International Conference on Data Mining (ICDM)
- International Conference on Machine Learning (ICML)
- SIAM International Conference on Data Mining (ICDM)

Courses taught

Undergraduate

ChE 231	Thermodynamics
ChE 350	Fluid Mechanics
CIS 140/	Cognitive Science
CSE 120	Programming Languages and Techniques
CSE/ChE 270	Expert Systems
CSE 391	Artificial Intelligence
EAS 410	Model Building with Modern Statistics

Graduate

ChE 500	Applied Mathematics I
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ChE 501	Applied Mathematics II
ChE 640	Fluid Dynamics
ChE 641	Heat and Mass Transfer
ChE 700	Bifurcation Theory
CIS 520	Machine Learning / Artificial Intelligence
CIS/GCB 535	Introduction to Bioinformatics
CIS 620	Machine Learning
CIS 700	Machine Learning in Bioinformatics
EMTM 554	Data Mining
EMTM 605	Advances in Artificial Intelligence
MGMT 560	Management of Technology
MGMT 732	Technology for Managers

Masters Students

2009	Paramveer Dhillon	“Transfer Learning using Feature Selection.”
2003	Alex Vasserman	“Identifying Chemical Names in Biomedical Text: An Investigation of the Substring Co-occurrence Based Approaches”
1988	Michael R. Weinstein Kodak	“Process scheduling using artificial intelligence”

Doctoral Students

current	Paramveer Dhillon (CIS)	“TBA”
current	Weichen Wu (CIS)	“TBA”
2010	Perry Evans (GCB)	“Modeling virus-host networks”
2010	Ted Sandler (CIS)	“Regularization and Model Selection with Networks of Features”
2009	Bill Kandylas (CIS)	“Online clustering and citation analysis using Streemer”
2008	Gary Morris (CIS)	“Active relational learning for kinship analysis”
2006	Jing Zhou (ESE) Microsoft	“Streaming Feature Selection”
2005	Andrew Schein Amaranth LLC	“Active learning using A-optimality”
2004	Sasha Popescul Yahoo	“Statistical Learning from Relational Databases”
2004	Panos Markopoulos McKinsey	“The Information Gap: Understanding Product Information Dissemination”
2003	Eugene Buehler Merck	“Statistical Models for the analysis of heterogeneous biological data sets”

2002	Roy Kwon U. of Toronto	“Approximate Mechanisms and Algorithms for Combinatorial Auctions” (with G. Anandalingam)
2000	David Parkes Harvard U.	“Iterative Combinatorial Auctions: Achieving Economic and Computational Efficiency”
1999	Rinaldo Jose Oregon	“On the optimal coordination of profit maximizing divisions using auctions and price theory”
1995	Evi Gazi Chem. Ind. Inst. Toxicology	“Verification of controllers for incompletely-known chemical plants” (with W.D. Seider)
1995	Jack Vinson Pharmacia	“Automated first principles reasoning using qualitative and quantitative models”
1993	Bill Foster BMS	“The significance of neuronal ionic conductances in the cardiorespiratory nucleus of the solitary tract of the rat and in Hodgkin-Huxley models”
1993	Catherine Catino Air Products	“Automated modeling of chemical plants with application to hazard and operability studies”
1993	Dimitris Psychogios JP Morgan	“Process control using structured neural networks”
1990	Stephen Grantham Merck	“Automated reasoning from first principles using qualitative physics”
1989	Charles X. Ling U. Western Ontario	“Inductive learning and invention in domains with primitive recursive structures”
1989	Paul P. Durand Exxon-Mobil	“Percolation and transport in random media with application to high temperature superconductors”
1989	Thomas J. Balsano Amoco	“Unidirectional solidification of an anisotropic binary alloy”
1989	Ralph Gonzales U. Rutgers, Camden	“Learning by progressive subdivision of state space”
1988	Steven J. Weinstein Kodak	“The low flow rate limit for immiscible fluid systems in narrow gaps”
1988	Francis X. Kelly Exxon-Mobil	“Growth morphologies in rapid solidification”

Publications – Refereed Publications

- medpie: An information extraction package for medical message board posts A. Benton; J.H. Holmes; S. Hill; A. Chung; L. Ungar *Bioinformatics* 20, 2012.
- VIF Regression: A Fast Regression Algorithm For Large Data D. Lin, D.P and Foster, and L.H. Ungar, *Journal of the American Statistical Association*, 106(493), 232–247, 2011.

- Limitations of Threshold-Based Brain Oxygen Monitoring for Seizure Detection, Soojin Park, Alexander Roederer, Ram Mani, Sarah Schmitt, Peter D. LeRoux, Lyle H. Ungar, Insup Lee, and Scott E. Kasner, *Neurocritical Care* 15(3), 469-476, 2011.
- Natural Supplements for H1N1 Influenza: Retrospective Observational Infodemiology Study of Information and Search Activity on the Internet, Shawndra Hill, Jun Mao, Lyle Ungar, Sean Hennessy, Charles E Leonard, and John Holmes, *J Med Internet Res*, 13(2), e36, 2011.
- Minimum Description Length Penalization for Group and Multi-Task Sparse Learning. Paramveer S. Dhillon, Dean Foster and Lyle Ungar. *Journal of Machine Learning Research (JMLR)*, 12, 525-564, 2011.
- Extracting templates from radiology reports using sequence alignment. Shengyang Wu, Curtis Langlotz, Paras Lakhani, Lyle Ungar. *International Journal of Data Mining and Bioinformatics*, in press, 2011.
- Dementia induces correlated reductions in white matter integrity and cortical thickness: A multivariate neuroimaging study with sparse canonical correlation analysis. Brian B. Avants, Philip A. Cook, Lyle Ungar, James C. Gee and Murray Grossman *NeuroImage* 50(3), 1004-1016, 2010
- Sequence alignment reveals possible MAPK docking motifs on HIV proteins. Perry Evans Ahmet Sacan, Lyle Ungar, Aydin Tozeren *PLOS ONE*, 5(1) e8942, 2010.
- Positioning Knowledge: Schools of Thought and New Knowledge Creation, S. Phineas Upham, Lori Rosenkopf and Lyle H. Ungar, *Scientometrics*, 83(2) 555-581, 2010.
- Innovating knowledge communities - An analysis of group collaboration and competition in science and technology. Phineas Upham, Lori Rosenkopf, Lyle H. Ungar: *Scientometrics* 83(2): 525-554, 2010.
- Information Markets for Product Attributes: A Game Theoretic, Dual Pricing Mechanism. P.M. Markopoulos and R. Aron and L.H. Ungar *Decision Support Systems* 49, 187199, 2010.
- Analyzing knowledge communities using foreground and background clusters, V. Kandylas, S. Upham, and L.H. Ungar,, *ACM Transactions on Knowledge Discovery from Data (TKDD)*, 4(2), 1-35, 2010.
- Prediction of HIV-1 virus-host protein interactions using virus and host sequence motifs. Perry Evans, Will Dampier, Lyle Ungar and Aydin Tozeren *BMC Medical Genomics* 2:27, 2009.
- Host sequence motifs shared by HIV predict response to antiretroviral therapy. William Dampier, Perry Evans, Lyle Ungar and Aydin Tozeren *BMC Medical Genomics* 2:47, 2009.
- A predictive model for identifying mini-regulatory modules in the mouse genome. Mahesh Yaragatti, Ted Sandler and Lyle Ungar *Bioinformatics* 25(3): 353-357, 2008; doi: 10.1093/bioinformatics/btn622
- Finding cohesive clusters for analyzing knowledge communities. Vasileios Kandylas, S. Phineas Upham and Lyle H. Ungar, *IEEE Knowledge and Information Systems* 17(3) 335-354, 2008.
- A Model of Market Power and Efficiency in Private Electronic Exchanges. Ravi Aron , Lyle Ungar, Annapurna Valluri, *European Journal of Operational Research*, (EJOR) 187, 922-942, 2008.
- MetaProm: a neural network based meta-predictor for alternative human promoter prediction. Junwen Wang, Sridhar Hannenhalli and Lyle H Ungar *BMC Genomics* 8:374, 2007.
- Active Learning for Logistic Regression: An Evaluation. A. Schein and L. Ungar, *Machine Learning Journal*, 68(3): 235-265, 2007.

- Streaming Feature Selection. J. Zhou, D. Foster, R. Stine, and L. Ungar *Journal of Machine Learning Research (JMLR)* 7(Sep):1861–1885, 2006.
- Identification of potential CSF biomarkers in ALS. G. M. Pasinetti, L. H. Ungar et al. *Neurology*, February 15, 2006.
- Automatic term list generation for entity tagging. Ted Sandler, Andrew I. Schein, and Lyle H. Ungar *Bioinformatics*, October 25, 2005.
- Iterative Combinatorial Auctions with Bidder-determined Combinations. R. Kwon, A. Anandalingam and L. Ungar, *Management Science*, **51**(3), 407-418, 2005.
- Using Prior Knowledge to Improve Genetic Network Reconstruction from Microarray Data, A. Bahl, P. Le, and L. Ungar, *In Silico Biology (ISB)*, 2004
- The CRASSS Algorithm For Integrating Annotation Data With Hierarchical Clustering Results, E. C. Buehler, J. R. Sachs, K. Shao, A. Bagchi, L. Ungar, *Bioinformatics*, 1367-4803, 2004.
- CROC: A New Metric for Recommender System Evaluation. A. I. Schein, A. Popescul, L. H. Ungar and D. M. Pennock, *Journal of Electronic Commerce Research* 5(1): 51-74, 2005.
- Dual Pricing in Electronic Markets, P. Markopoulos, R. Aron and L. H. Ungar, *Proc. International Conference on Information Systems (ICIS-2003)* December, 2003.
- Chloroplast Transit Peptide Prediction: a Peek Behind the Black Box, A.I. Schein, J. C. Kissinger and L. H. Ungar, *Nucleic Acids Research Methods*, **29**(16) e82. 2001.
- Pricing Interprocess Streams Using Slack Auctions, R. A. Jose and L.H. Ungar, *AIChE Journal*, 575-587, March, 2000.
- Estimating Monotonic Functions and Their Bounds, H. Kay and L.H. Ungar, *AIChE Journal*, 46(12), 2425-2434, 2000.
- Hybrid neural network models for environmental process control, R.D. De Veaux, R. Bain and L.H. Ungar, *Environmetrics* **10**(3), 225-236, 1999.
- Prediction Intervals for Neural Networks via Nonlinear Regression, R. De Veaux, J. Schumi, J. Schweinsberg, D. Shellington and L.H. Ungar, *Technometrics*, **40**(4) 273-282, 1998.
- A non-parametric Monte-Carlo technique for controller verification, E. Gazi, W. D. Seider and L. H. Ungar, *Automatica* **33**(5), 901-906, 1997.
- Active Learning for Vision-Based Robot Grasping, M. Salganicoff, L.H., Ungar and R. Bajcsy, *Machine Learning Journal* **23**251-78, 1996.
- Verification of controllers in the presence of uncertainty: application to styrene polymerization, E. Gazi, W.D. Seider and L.H. Ungar, *Industrial and Engineering Chemistry Research*, **35** (7) 2277-2287, 1996.
- Automatic-analysis of monte-carlo simulations of dynamic chemical plants, E. Gazi, L.H. Ungar, W.D. Seider and B.J. Kuipers, *Computers & Chemical Engineering* **20** S987-S992, 1996.
- Control of the physical world by intelligent agents: putting the pieces together, B. Kuipers and L.H. Ungar, *AI Magazine* 16:7-8 Spring 1995.
- Dynamic Process Monitoring and Fault Diagnosis with Qualitative Models, J.M. Vinson and L.H. Ungar, *IEEE Transactions on Man, Machines and Cybernetics*, 25(1), 181-189, 1995.

- A Model-Based Approach to Automated Hazard Identification of Chemical Plants, C.A. Catino and L.H. Ungar, *Computers and Chem. Engr.*, 41(1), 97-109, 1995.
- Comment on “Neural Networks and Related Methods for Classification” R.D. De Veaux, L.H. Ungar, D.J. Darken, *Journal of the Royal Statistical Society, Series B*, 56(3), 446-447, 1994.
- SVD-Net: An Algorithm which Automatically Selects Network Structure, D.C. Psychogios and L.H. Ungar, *IEEE Transactions on Neural Networks*, 5(3) 513-515, 1994.
- Significance of conductances in Hodgkin-Huxley models, W.R. Foster, L.H. Ungar and J.S. Schwaber, *Journal of Neurophysiology*, 70(6) 2502-2518, 1993.
- A Comparison of Two Nonparametric Estimation Schemes: MARS and Neural Networks, R.D. De Veaux, D.C. Psychogios and L.H. Ungar, *Computers and Chem. Engr.*, 17(8), 819-837, 1993.
- A Hybrid Neural Network - First Principles Approach to Process Modeling, D.C. Psychogios and L.H. Ungar, *AIChE Journal*, 1499-1512, October, 1992.
- Using Radial Basis Functions to Approximate a Function and Its Error Bounds, J.A. Leonard, M.A. Kramer and L.H. Ungar, *IEEE Transactions on Neural Networks*, 3(4) 624-627, 1992.
- A Neural Network Architecture that Computes its own Reliability, J.A. Leonard, M.A. Kramer and L.H. Ungar, *Computers and Chem. Engr.*, 16(9) 819-837, 1992.
- Neural Network Forecasting of Short Noisy Time Series, B. Foster, F. Collopy and L.H. Ungar, *Computers and Chem. Engr.*, 16(4) 293-298, 1992.
- Automatic Rebuilding of Qualitative Models for Diagnosis, J.M. Vinson, S.D. Grantham and L.H. Ungar, *IEEE Expert*, 23-30, August, 1992.
- Direct and Indirect Model Based Control Using Artificial Neural Networks, D.C. Psychogios and L.H. Ungar, *I & EC Res.* 30, 2564-2573, 1991.
- Automatic Generation of Qualitative Models of Chemical Process Units, C.A. Catino, S.D. Grantham and L.H. Ungar, *Computers and Chem. Engr.* 15(8) 583-599, 1991.
- Comparative Analysis of Qualitative Models when the Model Changes, S. D. Grantham and L. H. Ungar, *AIChE Journal* 37(6), 931-943, 1991.
- A First Principles Approach to Automated Troubleshooting of Chemical Plants, S. D. Grantham and L.H. Ungar, *Computers and Chem. Engr.* 14(7), 783-798, 1990.
- Prediction of Decoupling in High Temperature Superconductors, P.P. Durand and L.H. Ungar, *Phys. Rev. B* 41(1), 815-818, 1990.
- Expert Multivariable Control: Part 3 - Extension of EMC to Three-Product Sidestream Distillation Columns, W. L. Luyben, V. Tzouanas, C. Georgakis and L.H. Ungar, *I & EC Research* 29, 403-415, 1990.
- Expert Multivariable Control: Part 2 - Application of Two-Product Distillation Columns, W. L. Luyben, V. Tzouanas, C. Georgakis and L.H. Ungar, *I & EC Research* 29, 389-403, 1990.
- Luyben, W. L., V. Tzouanas, C. Georgakis and L.H. Ungar, Expert Multivariable Control: Part I - Structure and Design Methodology, *I & EC Research* 29, 382-388, 1990.
- A Theoretical Study of Two- Phase Flow through a Narrow Gap with a Moving Contact Line: Viscous Fingering in a Hele-Shaw Cell, S.J. Weinstein, E.B. Dussan V. and L.H. Ungar, *J. Fluid. Mech.* 221, 53-76, 1990.

- Adaptive Networks for Fault Diagnosis and Process Control, L.H. Ungar, S.N. Kamens and B. Powell, *Computers and Chem. Eng.* 14, 561-572, 1990.
- A Molecular Dynamics Investigation of Solute Trapping During Rapid Solidification of Silicon, F.X. Kelly and L.H. Ungar, *J. Crystal Growth* 102, 658-666, 1990.
- Finite Element Methods for Unsteady Solidification Problems Arising in Prediction of Morphological Structure, L.H. Ungar, N. Ramprasad and R.A. Brown, *J. Scientific Computing* 3(1), 77-108, 1988.
- Expert Multivariable Control, V. Tzouanas, C. Georgakis, W. L. Luyben and L.H. Ungar, *Computers and Chem. Eng.* 12(9/10), 1065-1074, 1988.
- Percolation and Transport in an Assembly of Anisotropic Conductors, P.P. Durand and L.H. Ungar, *Physical Review A* 26, 2487-2501, 1988.
- Application of the Boundary Element Method to Dense Dispersions, P.P. Durand and L.H. Ungar, *Int. J. Numer. Methods in Engr.* 26, 2487-2501, 1988.
- Nonlinear Systems in Chemical Engineering, W.D. Seider and L.H. Ungar, *Chemical Engineering Education* 21(4), 178-183, 1987.
- Steady and Oscillatory Pattern Formation in Rapid Solidification, F.X. Kelly and L.H. Ungar, *Physical Review B* 34, 1746-1753, 1986.
- Cellular Morphologies in Directional Solidification: IV. The Formation of Deep Cells, L.H. Ungar and R.A. Brown, *Physical Review B* 31, 5931-5940, 1985.
- Cellular Morphologies in Directional Solidification: III. The Effects of Heat Transfer and Solid Diffusivity, L.H. Ungar, M.J. Bennett and R.A. Brown, *Physical Review B* 31, 5923-5930, 1985.
- Applied Mathematics in Chemical Engineering, D. Lauffenburger, E. Dussan V. and L. Ungar, *Chemical Engineering Education* Fall, 160-163 and 214-215, 1984.
- Cellular Interface Morphologies in Directional Solidification: II. The Effect of Grain Boundaries, L.H. Ungar and R.A. Brown, *Physical Review B* 30, 3993-3999, 1984.
- Cellular Interface Morphologies in Directional Solidification: I. The One-Sided Model, L.H. Ungar and R.A. Brown, *Physical Review B* 29, 1367-1380, 1984.
- The Dependence of the Shape and Stability of Captive Rotating Drops on Multiple Parameters, L.H. Ungar and R.A. Brown, *Phil. Trans. R. Soc. Lond.* A306, 347-370, 1982.

Publications - Refereed Conference Proceedings

- Spectral Dependency Parsing with Latent Variables, Dhillon, Rodu, Collins, Foster and Ungar *EMNLP* 2012.
- Spectral Learning of Latent-Variable PCFGs Shay B. Cohen, Karl Stratos, Michael Collins, Dean P. Foster, and Lyle Ungar *ACL* 2012.
- Using CCA to improve CCA: A new spectral method for estimating vector models of words, Paramveer Dhillon, Dean Foster and Lyle Ungar, *ICML* 2012.
- Using Word Similarities to better Estimate Sentence Similarity, Sneha Jha, H. Andrew Schwartz and Lyle H. Ungar, *Semeval* 2012.

- Characterizing Emergence Using a Detailed Micro-model of Science: Investigating Two Hot Topics in Nanotechnology Kevin W. Boyack, Richard Klavans, Henry Small, Lyle Ungar *Technology Management for Emerging Technologies (PICMET)* 2012.
- Partial Sparse Canonical Correlation Analysis (PSCCA) for population studies in medical imaging Paramveer S. Dhillon, Brian Avants, Lyle Ungar, James Gee, *ISBI 2012 Paper 1074*, 2012.
- Spectral methods for estimating probabilistic language models Lyle Ungar, Paramaveer Dhillon, Jordan Rodu, Michael Collins, and Dean Foster *Snowbird Learning Workshop*, 2012.
- Multi-View Learning of Word Embeddings via CCA, Paramveer Dhillon, Dean Foster, Lyle Ungar, *Neural Information Processing Systems (NIPS)* 2011.
- Discovery of Significant Emerging Trends, Saurabh Goorha and Lyle Ungar *ACM Knowledge Discovery and Data Mining (KDD)* 57–64, 2010.
- A System for De-identifying Medical Message Board Text Benton, A. and Hill, S. and Ungar, L. and Chung, A. and Leonard, C. and Freeman, C. and Holmes, J.H. *IEEE Ninth International Conference on Machine Learning and Applications*. 485490, 2010. also published in *BMC Bioinformatics*, Jun 9;12 Suppl 3:S2, 2011.
- Mining Internet Conversations for Evidence of Supplement-Associated Adverse Events John H. Holmes, Adrian Benton, Annie Chung, Cristin Freeman, Sean Hennessy, Shawndra Hill, Charles Leonard, Jun Mao, Lyle Ungar *AMIA 2010 Symposium Proceedings (AMIA-1851-A2009)* 1082. 2010.
- A new approach to lexical disambiguation of Arabic text, R. Shah, P.S Dhillon, M. Liberman, D. Foster, M. Maamouri and L. Ungar, *Proceedings of the 2010 Conference on Empirical Methods in Natural Language Processing*, 725–735, 2010.
- Feature Selection using Multiple Streams, Paramveer Dhillon, Dean Foster and Lyle Ungar. *Proceedings of The Thirteenth International Conference on Artificial Intelligence and Statistics (AISTATS): Journal of Machine Learning Research - Proceedings Track 9* 153-160, 2010.
- Multi-Task Feature Selection using the Multiple Inclusion Criterion (MIC), Paramveer Dhillon, Brian Tomasik, Dean Foster and Lyle Ungar, *ECML-PKDD (European Conference on Machine Learning)*, Bled, Slovenia, Sept. 2009.
- Transfer Learning, Feature Selection and Word Sense Disambiguation, Paramveer Dhillon, and Lyle Ungar. *ACL-IJCNLP (Annual Meeting of the Association of Computational Linguistics)*, 257-260, 2009.
- Transfer Learning Using Feature Selection, Paramveer S. Dhillon, Dean P. Foster, Lyle H. Ungar, *CoRR* abs/0905.4022, 2009.
- Gamma-band ECoG correlates of human cognitive representations. Jacobs, J., Ungar, L.H. and Kahana, M.J. Program No. 279.2. Chicago, IL: *Society for Neuroscience*, 2009.
- Efficient Clustering of Web-Derived Data Sets. Luis Sarmiento, Alexander Kehelenbeck, Eugenio Oliveira, and Lyle Ungar, *International Conference on Machine Learning and Data Mining (MLDM)* 2009.
- An Approach to Web-scale Named-Entity Disambiguation. Luis Sarmiento, Alexander Kehelenbeck, Eugenio Oliveira, and Lyle Ungar, *International Conference on Machine Learning and Data Mining (MLDM)* 2009.
- Resolving Identity Uncertainty with Learned Random Walks. Ted Sandler, Lyle H. Ungar and Koby Crammer, *International Conference on Data Mining (ICDM)*, 457-465, 2009.b

- Regularized Learning with Networks of Features. Ted Sandler, John Blitzer, Partha Pratim Talukdar, Lyle H. Ungar, *Neural Information Processing Systems (NIPS)*, 1401-1408, 2008.
- Protein-Protein Interaction Network Alignment by Quantitative Simulation. P Evans, T Sandler, L Ungar *Proceedings of the 2008 IEEE International Conference on Bioinformatics and Biomedicine (BIBM '08)*, 325-328, 2008.
- Multiway Clustering for Creating Biomedical Term Sets. V Kandylas, L Ungar, T Sandler, S Jensen *Proceedings of the 2008 IEEE International Conference on Bioinformatics and Biomedicine (BIBM '08)*, 449-452, 2008.
- Using Text Mining to Analyze User Forums. R. Feldman, M. Fresko, J. Goldenberg, O. Netzer, L. Ungar *5th IEEE ICSSSM'08, Melbourne*, 2008.
- Web-Scale Named Entity Recognition. Casey Whitelaw, Alex Kehlenbeck, Nemanja Petrovic and Lyle Ungar *ACM 17th Conference on Information and Knowledge Management (CIKM)*, 123-132, 2008.
- Using sequence classification for filtering web pages. Binyamin Rosenfeld, Ronen Feldman and Lyle H. Ungar *ACM 17th Conference on Information and Knowledge Management (CIKM)*, 1355-1356, 2008.
- Efficient Feature Selection in the Presence of Multiple Feature Classes Paramveer S. Dhillon, Dean Foster and Lyle H. Ungar *IEEE International Conference on Data Mining (ICDM)*, 2008.
- Scalable Methods for Extracting Named Entities from the Web Casey Whitelaw, Alex Kehlenbeck, Luis Sarmiento, Lyle Ungar *INFORMS 2008* (abstract only)
- In defense of L_0 . Dongyu Lin, Dean Foster and Lyle Ungar *ICML-2008 Workshop on Sparse Optimization and Variable Selection*, 2008.
- Information Theory-Based Feature Selection Dean P. Foster and Lyle H. Ungar *Fourteenth Yale Workshop on Adaptive and Learning Systems*, 2008
- Learning with Locally Linear Feature Regularization Ted Sandler, John Blitzer, Lyle Ungar *Snowbird Learning Workshop*, 2008
- Maximal Subset Feature Selection for BioInformatics Dean P. Foster, Anna Goldenberg and Lyle H. Ungar *Snowbird Learning Workshop*, 2008
- Finding cohesive clusters for analyzing knowledge communities, Vasileios Kandylas, S. Phineas Upham, and Lyle H. Ungar, *Seventh IEEE International Conference on Data Mining (ICDM)*, Oct 2007.
- Extracting Product Comparisons from Discussion Boards, Feldman et al. *Seventh IEEE International Conference on Data Mining (ICDM)*, Oct 2007.
- Innovating Knowledge Communities, Phin Upham, Lori Rosenkopf, and Lyle Ungar, 2007 Academy of Management Meeting, Philadelphia, PA (selected for the "Best Paper Proceedings of the 2007 Academy of Management Meeting.")
- An Empirical Study of the Behavior of Active Learning for Word Sense Disambiguation, J. Chen, A. Schein, L. Ungar and M. Palmer *HLT-NAACL 06*, 2006.
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Patents

- US 5,335,391 Method and apparatus for pattern mapping system with self-reliability check
M.A. Kramer, J.A. Leonard and L.H. Ungar
- US 5,951,623 Lempel-Ziv data compression technique utilizing a dictionary prefilled with frequent letter combinations, words and/or phrases
J.C. Reynar, F. Herz, J. Eisner and L. Ungar
- US 5,835,087 System for general of object profiles for a system for customized electronic identification of desirable objects
F. Herz, J. Eisner and L. Ungar
- US 5,758,257 System and method of scheduling broadcast of and access to video program and other data using customer profiles
F. Herz, L. Ungar, J. Zhang, D. Wachob and M. Salganicoff
- US 5,754,939 System for generation of user profiles for a sysem for customized electronic identification of desirable objects
F. Herz, J. Eisner L. Ungar, M. Marcus
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- US 6,020,883 System and method of scheduling broadcast of and access to video program and other data using customer profiles
F. Herz, L. Ungar, J. Zhang, D. Wachob and M. Salganicoff
- US 20,030,135,445 Stock market prediction using natural language processing
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- US 20,020,184,102 Selling price information in e-commerce
P. Markopoulos and L. Ungar