

Resources: predictive modeling with networked data

Here is a non-exhaustive list of resources to explore work on predictive modeling with networked data. Beyond providing overviews & details, and identifying particular research projects, these resources give a flavor for the variety of topics, and a sampling of the researchers working on them.

- Books
 - Introduction to Statistical Relational Learning, ed. Getoor and Taskar 2007
 - <http://mitpress.mit.edu/catalog/item/default.asp?ttype=2&tid=11331>
 - Relational Data Mining, ed. Dzeroski and Lavrac 2001
 - <http://www-ai.ijs.si/SasoDzeroski/RDMBook/>
 - Random Graph Dynamics by Rick Durrett . Cambridge University Press, 2006
 - <http://www.math.cornell.edu/~durrett/RGD/RGD.html>
 - N.E.J Newman, The Structure and Function of Complex Networks. SIAM Review (this isn't a book but is better than any of the books that overview complex networks).
 - <http://arxiv.org/abs/cond-mat/0303516>
- Tutorials
 - Statistical Relational Learning
 - <http://www.cs.umd.edu/~getoor/Talks/SRL-ICML-ILP05-Tutorial.ppt>
 - Markov Logic Networks
 - www.washington.edu/homes/pedrod/psrl.ppt
- Journals (special issues)
 - Multirelational data mining and statistical relational learning (MLJ)
 - <http://www.springerlink.com/content/5830543713335321/>
 - Inductive logic programming
 - (several in MLJ and JMLR)
 - Mining and learning with graphs (MLJ)
 - http://www.springer.com/cda/content/document/cda_downloaddocument/CFP_10994_171106.pdf?SGWID=0-0-45-334589-p35726603
- Workshops
 - Economics of social networks
 - ESSET 2006: <http://www.szgerzensee.ch/research/conferences/esset06/?L=1>
 - Mining and learning with graphs
 - ECML 2006 <http://www.inf.uni-konstanz.de/mlg2006/index.shtml>
 - <http://mlg07.dsi.unifi.it/>
 - (see also MGTS 2003-2005)
 - Multi-relational data mining:
 - KDD 2004 <http://www-ai.ijs.si/SasoDzeroski/MRDM2004/>
 - KDD 2003 <http://www-ai.ijs.si/SasoDzeroski/MRDM2003/>
 - KDD 2002 <http://www-ai.ijs.si/SasoDzeroski/MRDM2002/>
 - NYU Workshops on the Economics of Information Technology
 - 2006: http://w4.stern.nyu.edu/ceder/events.cfm?doc_id=5583
 - 2005: http://w4.stern.nyu.edu/ceder/events.cfm?doc_id=4174
 - Social network analysis
 - KDD 2007 <http://workshops.socialnetworkanalysis.info/websnakdd2007/>
 - KDD 2008 <http://workshops.socialnetworkanalysis.info/SNAKDD2008/>
 - Statistical network analysis:
 - <http://www.icml2006.org/icml2006/technical/workshops.html>
 - Statistical Network Analysis: Models, Issues, and New Directions. E. Airoldi, D.

Blei, S. Fienberg, A. Goldenberg, E. Xing, A. Zheng (Eds.). LNCS 4503, Springer.

- Statistical relational learning
 - ICML 2006 <http://www.cs.umd.edu/projects/srl2006/>
 - ICML 2004 <http://www.cs.umd.edu/projects/srl2004/>
 - IJCAI 2003 <http://kdl.cs.umass.edu/srl2003/>
 - AAI 2000 <http://robotics.stanford.edu/srl>
- Dagstuhl workshops on Probabilistic, Logical, & Relational Learning
 - <http://www.dagstuhl.de/05051/>
 - <http://kathrin.dagstuhl.de/07161>
- Conferences
 - Inductive Logic Programming (annual; <http://ida.felk.cvut.cz/ilp2008/>)

Bibliography

- D. Agarwal & S. Merugu (2007). Predictive Discrete Latent Factor Models for Large Scale Dyadic Data. KDD'07.
- J. C. Almack. The influence of intelligence on the selection of associates. *School and Society*, 16: 529–530, 1922.
- P. Angin and J. Neville. A Shrinkage Approach for Modeling Non-Stationary Relational Autocorrelation. In Proceedings of the 2nd SNA Workshop, 14th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 2008.
- Aral, S., Brynjolfsson, E. and M. Van Alstyne, 2006. Information, Technology & Information Worker Productivity: Task Level Evidence. International Conference on Information Systems 2006, Milwaukee, WI.
- Aral, S. and M Van Alstyne, 2007. Network Position and Information Advantage. Working Paper, New York University.
- Bala, V., and S. Goyal, 2000. A Non-cooperative Model of Network Formation. *Econometrica* 68, 1181-1231.
- A. Bernstein, S. Clearwater, and F. Provost. The relational vector-space model and industry classification. In Proceedings of the Learning Statistical Models from Relational Data Workshop at the Nineteenth International Joint Conference on Artificial Intelligence (IJCAI), 2003.
- J. Besag. Spatial interaction and the statistical analysis of lattice systems. *Journal of the Royal Statistical Society*, 36(2):192–236, 1974.
- J. Besag. Statistical analysis of non-lattice data. *The Statistician*, 24(3):179–195, 1975.
- J. Besag. On the statistical analysis of dirty pictures. *Journal of the Royal Statistical Society*, 48(3): 259–302, 1986.
- P. M. Blau. *Inequality and Heterogeneity: A Primitive Theory of Social Structure*. New York: Free Press, 1977.
- A. Blum and S. Chawla. Learning from labeled and unlabeled data using graph mincuts. In Proceedings of the Eighteenth International Conference on Machine Learning (ICML), pages 19–26, 2001.
- A. Blum, J. Lafferty, R. Reddy, and M. R. Rwebangira. Semi-supervised learning using randomized mincuts. In Proceedings of the Twenty-first International Conference on Machine Learning (ICML), pages 97–104, 2004.
- H. Bott. Observation of play activities in a nursery school. *Genetic Psychology Monographs*, 4:44–88, 1928.
- Y. Boykov, O. Veksler, and R. Zabih. Fast approximate energy minimization via graph cuts. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 23(11):1222–1239,

- 2001.
- Y. Bramouille, H. Djebbari and B. Fortin (2007). Identification of Peer Effects through Social Networks. CIRPEE Working Paper No. 07-05. Available at SSRN: <http://ssrn.com/abstract=965818>
- Bramouille, Y., and R. Kranton, 2005. Strategic Experimentation in Networks. *Journal of Economic Theory* (forthcoming).
- Bramouille, Y., Djebbari, H., and Fortin, B. (2007). Identification of peer effects through social networks. *Bonn Institute for the Study of Labor Working Paper*.
- S. Chakrabarti, B. Dom, and P. Indyk. Enhanced hypertext categorization using hyperlinks. In Proceedings of the 1998 ACM SIGMOD International Conference on Management of Data, pages 307–319, 1998.
- Chwe, M., 2000. Communication and Coordination in Social Networks. *Review of Economic Studies* 67, 1-16.
- C. Cortes, D. Pregibon, and C. T. Volinsky. Communities of interest. In Proceedings of the Fourth International Conference on Advances in Intelligent Data Analysis (IDA), pages 105–114, 2001.
- R. G. Cowell, A. P. Dawid, S. L. Lauritzen, and D. J. Spiegelhalter. Probabilistic networks and expert systems. Springer, 1999.
- M. Craven, D. Freitag, A. McCallum, T. Mitchell, K. Nigam, and C. Y. Quek. Learning to extract symbolic knowledge from the World Wide Web. In Proceedings of the Fifteenth National Conference on Artificial Intelligence (AAAI), pages 509–516, 1998.
- Dasgupta, K., Singh, R., Viswanathan, B., Chakraborty, D., Mukherjea, S., Nanavati, A. A., and Joshi, A. 2008. Social ties and their relevance to churn in mobile telecom networks. In Proceedings of the 11th international Conference on Extending Database Technology: Advances in Database Technology (Nantes, France, March 25 - 29, 2008). EDBT '08, vol. 261. ACM, New York, NY, 668-677.
- L. De Raedt, H. Blockeel, L. Dehaspe, and W. Van Laer. Three companions for data mining in first order logic. In S. Dzeroski and N. Lavrac, editors, *Relational Data Mining*, pages 105–139. Berlin; New York: Springer, 2001.
- I. S. Dhillon. Co-clustering documents and words using bipartite spectral graph partitioning. In Proceedings of the Seventh ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, pages 269–274, 2001.
- R. L. Dobrushin. The description of a random field by means of conditional probabilities and conditions of its regularity. *Theory of Probability and its Applications*, 13(2):197–224, 1968.
- P. Domingos and M. Richardson. Mining the network value of customers. In Proceedings of the Seventh ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, pages 57–66, 2001.
- S. Dzeroski and N. Lavrac. *Relational Data Mining*. Berlin; New York: Springer, 2001.
- H. Eldardiry and J. Neville. A Resampling Technique for Relational Data Graphs. In Proceedings of the 2nd SNA Workshop, 14th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 2008.
- T. Fawcett and F. Provost. Adaptive fraud detection. *Data Mining and Knowledge Discovery*, 3: 291–316, 1997.
- T. Fawcett and F. Provost. Activity monitoring: Noticing interesting changes in behavior. In Proceedings of the Fifth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, pages 53–62, 1999.
- P. A. Flach and N. Lachiche. Naive Bayesian classification of structured data. *Machine Learning*, 57:233-269, 2004.
- F. Fouss, A. Pirotte, J. Renders, and M. Saerens (2007). Random-Walk Computation of Similarities between Nodes of a Graph with Application to Collaborative Recommendation *IEEE Transactions on Knowledge and Data Engineering*, Vol. 19, No. 3, March 2007.

- L. Freeman. Some antecedents of social network analysis. *Connections* 19:39–42, 1996.
- N. Friedman, L. Getoor, D. Koller, and A. Pfeffer. Learning probabilistic relational models. In Proceedings of the Sixteenth International Joint Conference on Artificial Intelligence (IJCAI), pages 1300–1309, 1999.
- B. Gallagher & T. Eliassi-Rad. An Evaluation of Experimental Methodology for Classifiers of Relational Data, 2007 IEEE International Conference on Data Mining, Workshop on Mining Graphs and Complex Structures, Omaha, NE, October 2007.
- B. Gallagher, T. Eliassi-Rad, H. Tong, and C. Faloutsos. Using Ghost Edges for Classification in Sparsely Labeled Networks. Proceedings of the Fourteenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, Las Vegas, NV, August 2008.
- B. Gallagher & T. Eliassi-Rad. Leveraging Label-Independent Features for Classification in Sparsely Labeled Networks: An Empirical Study, Proceedings of the Second ACM SIGKDD Workshop on Social Network Mining and Analysis (SNA-KDD'08), Las Vegas, NV, August 2008.
- A. Galeotti, S. Goyal, M. Jackson, and L. Yariv, 2006. Network Games. Mimeo, Caltech.
- A. Galstyan and P. Cohen (2007) Empirical Comparison of "Hard" and "Soft" Label Propagation for Relational Classification The 9th International Conference on Inductive Logic Programming, ILP-07, Corvallis, Oregon.
- A. Galstyan and P. Cohen (2006), Relational Classification Through Three-State Epidemic Dynamics, The 9th International Conference on Information Fusion (Fusion-06), special session on Making Histories
- A. Galstyan and P. Cohen (2005b), Inferring Useful Heuristics from the Dynamics of Iterative Relational Classifiers, Proc. of the Nineteenth International Joint Conference on Artificial Intelligence, IJCAI-2005
- A. Galstyan and P. Cohen. Is guilt by association a bad thing? In Proceedings of the First International Conference on Intelligence Analysis (IA), 2005.
- S. Geman and D. Geman. Stochastic relaxation, Gibbs distributions and the Bayesian restoration of images. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 6:721–741, 1984.
- W. R. Gilks, S. Richardson, and D. J. Spiegelhalter. *Markov Chain Monte Carlo in Practice*. Chapman & Hall/CRC, 1995.
- S. Goyal, and J. L. Moraga-Gonzalez, 2001. R&D Networks. *The RAND Journal of Economics* 32, 686-707.
- D. Greig, B. Porteous, and A. Seheult. Exact maximum a posteriori estimation for binary images. *Journal of the Royal Statistical Society*, 51(2):271–279, 1989.
- T. Hastie, R. Tibshirani, and J. Friedman. *The Elements of Statistical Learning*. Springer Verlag, New York, 2001.
- D. D. Heckathorn and J. Jeffri. Jazz networks: Using respondent-driven sampling to study stratification in two jazz musician communities. Unpublished paper presented at American Sociological Association Annual Meeting, August 2003.
- D. Heckerman, D. M. Chickering, C. Meek, R. Rounthwaite, and C. Kadie. Dependency networks for inference, collaborative filtering, and data visualization. *Journal of Machine Learning Research (JMLR)*, 1:49–75, 2000.
- S. Hill, F. Provost, and C. Volinsky. Network-based marketing: Identifying likely adopters via consumer networks. *Statistical Science*, 22(2):256–276, 2006a.
- S. Hill, D.K. Agarwal, R. Bell, and C. Volinsky. Building an effective representation for dynamic networks. *Journal of Computational & Graphical Statistics*, 15(3):584–608, 2006b.
- G. E. Hinton and T. J. Sejnowski. Learning and relearning in Boltzmann machines. *Parallel Distributed Processing: Explorations in the Microstructure of Cognition*, 1: Foundations:282–317, 1986.
- J. J. Hopfield. Neural networks and physical systems with emergent collective computational

- abilities. *Proceedings of the National Academy of Sciences of the United States of America*, 79(8): 2554–2558, 1982.
- Z. Huang, H. Chen, and D. Zeng. Applying associative retrieval techniques to alleviate the sparsity problem in collaborative filtering. *ACM Transactions on Information Systems (TOIS)*, 22(1): 116–142, 2004.
- R. A. Hummel and S. W. Zucker. On the foundations of relaxation labeling processes. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 5(3):267–287, 1983.
- E. Ising. Beitrag zur Theorie des Ferromagnetismus. *Zeitschrift f. Physik*, 31:253–258, 1925. [German].
- M. Jackson, 2004. A Survey of Models of Network Formation: Efficiency. Chapter 1 in Demange, G. and M. Wooders (eds.) *Formation in Economics; Networks, Clubs and Coalitions*, Cambridge Press.
- M. Jackson, and L. Yariv, 2006. Diffusion of Behavior Properties in Network Games. Mimeo, Stanford University. <http://www.stanford.edu/~jacksonm/netbehavior.pdf>
- M. Jackson, "The Study of Social Networks In Economics," forthcoming in *The Missing Links: Formation and Decay of Economic Networks*, edited by Joel Podolny and James E. Rauch; Russell Sage Foundation, 2007.
- D. Jensen and J. Neville. Data mining in social networks. In *National Academy of Sciences Symposium on Dynamic Social Network Modeling and Analysis*, 2002a.
- D. Jensen and J. Neville. Linkage and autocorrelation cause feature selection bias in relational learning. In *Proceedings of the Nineteenth International Conference on Machine Learning (ICML)*, pages 259–266, 2002b.
- D. Jensen, J. Neville, and B. Gallagher. Why collective inference improves relational classification. In *Proceedings of the Tenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, pages 593–598, 2004.
- T. Joachims. Transductive learning via spectral graph partitioning. In *Proceedings of the Twentieth International Conference on Machine Learning (ICML)*, pages 290–297, 2003.
- Kakade, S., M. Kearns and L. Ortiz, 2004. Graphical Economics. Available at <http://www.cis.upenn.edu/~mkearns/papers/graphecon.pdf>
- Karamon, J. Matsuo, Y. Yamamoto, H. Ishizuka, M. (2007). Generating Social Network Features for Link-Based Classification. *LNCS 2007, NUMB 4702*, pages 127-139
- Kelejian, H.H., and Prucha, I.R. (1998). A generalized spatial two-stage least square procedure for estimating a spatial autoregressive model with autoregressive disturbance. *Journal of Real Estate Finance and Economics* 104: 219-257.
- K. Kersting, and L. De Raedt (2001). Towards combining inductive logic programming with Bayesian networks. In *Proceedings of the Eleventh International Conference on Inductive Logic Programming* (pp. 118–131). Strasbourg, France: Springer.
- J. Kleinberg and E. Tardos. Approximation algorithms for classification problems with pairwise relations: Metric labeling and Markov random fields. In *Proceedings of the Fortieth Annual Symposium on Foundations of Computer Science (FOCS)*, pages 14–23, 1999.
- R. Kohavi and G. John. Wrappers for feature subset selection. *Artificial Intelligence*, 97(1–2): 273–324, 1997.
- D. Koller and A. Pfeffer. Probabilistic frame-based systems. In *Proceedings of the Fifteenth National Conference on Artificial Intelligence (AAAI)*, pages 580–587, 1998.
- S. Kramer, N. Lavrac, and P. Flach. Propositionalization approaches to relational data mining. In S. Dzeroski and N. Lavrac, editors, *Relational Data Mining*, pages 262–291. Berlin; New York: Springer, 2001.
- J. Lafferty, A. McCallum, and F. Pereira. Conditional random fields: Probabilistic models for segmenting and labeling sequence data. In *Proceedings of the Eighteenth International Conference on Machine Learning (ICML)*, pages 282–289, 2001.
- P. Langley. Crafting papers on machine learning. In *Proceedings of the Seventeenth International*

- Conference on Machine Learning (ICML), pages 1207–1212, 2000.
- P. Lazarsfeld and R. K. Merton. Friendship as a social process: A substantive and methodological analysis. In M. Berger, T. Abel, and C. H. Page, editors, *Freedom and Control in Modern Society*, pages 18–66. Van Nostrand, 1954.
- Lee, L.F. (2003). Best spatial two stage least squares estimators for a spatial autoregressive model with autoregressive disturbances. *Econometric Reviews* 22: 307-335.
- Lee, L.F. (2006). Identification and estimation of econometric models with group interactions, contextual factors and fixed effects. Mimeo Ohio State University.
- C. P. Loomis. Political and occupational cleavages in a Hanoverian village. *Sociometry*, 9:316–333, 1946.
- Q. Lu and L. Getoor. Link-based classification. In *Proceedings of the Twentieth International Conference on Machine Learning (ICML)*, pages 496–503, 2003.
- S. Macskassy (2007). Improving Learning in Networked Data by Combining Explicit and Mined Links. *Proceedings of the Twenty-Second Conference on Artificial Intelligence (AAAI-2007)*, July 22-26, 2007, Vancouver, Canada.
- S. Macskassy (2007). Improving Within-Network Classification with Local Attributes. *Workshop on Text-Mining and Link Analysis (Textlink) at the Twentieth International Joint Conference on Artificial Intelligence*, January 7, 2007, Hyderabad, India.
- S. Macskassy and F. Provost. A simple relational classifier. In *Proceedings of the Multi-Relational Data Mining Workshop (MRDM) at the Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, 2003.
- S. Macskassy and F. Provost. Suspicion scoring based on guilt-by-association, collective inference, and focused data access. In *Proceedings of the First International Conference on Intelligence Analysis (IA)*, 2005.
- S. Macskassy and F. Provost. Classification in Networked Data: A toolkit and a univariate case study. *Journal of Machine Learning Research* 8(May):935-983, 2007.
- C. Manski (1993). Identification of Endogenous Social Effects: The Reflection Problem. *The Review of Economic Studies*, Vol. 60, No. 3 (Jul., 1993), pp. 531-542
- A. McCallum, K. Nigam, J. Rennie, and K. Seymore. Automating the construction of internet portals with machine learning. *Information Retrieval*, 3(2):127–163, 2000.
- M. McPherson, L. Smith-Lovin, and J. M. Cook. Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, 27:415–444, 2001.
- Mitchell, T.M.. *Machine Learning*. McGraw Hill, New York, NY, 1997.
- Mobius, M and A. Sdezl.. 2007. Trust and Social Collateral. <http://mobius.fas.harvard.edu/papers/socialcollateral.pdf>
- Moffitt, R.A. (2001). Policy interventions, low-level equilibria, and social interactions, in S. Durlauf and H.P. Young, eds., *Social Dynamics*, MIT Press, Cambridge, MA: 45-82.
- K. Murphy, Y. Weiss, and M. I. Jordan. Loopy belief-propagation for approximate inference: An empirical study. In *Proceedings of the Fifteenth Conference on Uncertainty in Artificial Intelligence (UAI)*, pages 467–475, 1999.
- J. Neville and D. Jensen. Iterative classification in relational data. In *Proceedings of the Workshop on Learning Statistical Models from Relational Data at the Seventeenth National Conference on Artificial Intelligence (AAAI)*, pages 13–20, 2000.
- J. Neville and D. Jensen. Collective classification with relational dependency networks. In *Proceedings of the Multi-Relational Data Mining Workshop (MRDM) at the Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, 2003.
- J. Neville and D. Jensen. Dependency networks for relational data. In *Proceedings of the Fourth IEEE International Conference in Data Mining (ICDM)*, pages 170–177, 2004.
- J. Neville and D. Jensen. Leveraging relational autocorrelation with latent group models. In *Proceedings of the Fifth IEEE International Conference in Data Mining (ICDM)*, pages 322–329, 2005.

- J. Neville and D. Jensen. Relational dependency networks. *Journal of Machine Learning Research (JMLR)*, 8(Mar):653–692, 2007.
- J. Neville and D. Jensen. A Bias/Variance Decomposition for Models Using Collective Inference. *Machine Learning Journal*, 2008.
- J. Neville, D. Jensen, L. Friedland, and M. Hay. Learning relational probability trees. In *Proceedings of the Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, pages 625–630, 2003.
- J. Neville, O. Simsek, D. Jensen, J. Komoroske, K. Palmer, and H. Goldberg. Using relational knowledge discovery to prevent securities fraud. In *Proceedings of the Eleventh ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, pages 449–458, 2005.
- M. E. J. Newman. Mixing patterns in networks. *Physical Review E*, 67, 2003. 026126.
- Oestreicher-Singer, G. and Sundararajan, A., 2006. Network Structure and the Long Tail of Electronic Commerce. Working Paper CeDER-07-03, New York University. (Earlier versions in *Proceedings of the 2007 International Workshop and Conference on Network Science*, 2006 *International Conference on Information Systems*).
- Oestreicher-Singer, G. and Sundararajan, A., 2007. Recommendation Networks and Peer Effects in Electronic Commerce. Mimeo, New York University.
- G. Oestreicher-Singer & A. Sundararajan (2008). Identifying Social Effects Using Networked ECommerce Data. SCECR-08.
- S. Pandit, D. Chau, S. Wang and C. Faloutsos. NetProbe: A Fast and Scalable System for Fraud Detection in *Proceedings of WWW 2007, Banff, Alberta, Canada, May 8-12, 2007*.
- J. Pearl. *Probabilistic Reasoning in Intelligent Systems*. Morgan Kaufmann, 1988.
- C. Perlich. Citation-based document classification. In *Workshop on Information Technology and Systems (WITS)*, 2003.
- C. Perlich and F. Provost. Aggregation-based feature invention and relational concept classes. In *Proceedings of the Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, pages 167–176, 2003.
- C. Perlich and F. Provost. Distribution-based aggregation for relational learning with identifier attributes. *Machine Learning*, 62(1/2):65–105, 2006.
- C. Perlich, F. Provost, and J. Simonoff. Tree induction vs. logistic regression: A learning-curve analysis. *Journal of Machine Learning Research (JMLR)*, 4:211-255, 2003.
- A. Popescul and L. H. Ungar. Statistical relational learning for link prediction. In *Proceedings of the Learning Statistical Models from Relational Data Workshop at the Nineteenth International Joint Conference on Artificial Intelligence (IJCAI)*, 2003.
- R. B. Potts. Some generalized order-disorder transformations. *Cambridge Philosophic Society*, 48: 106–109, 1952.
- C. Preisach & L Schmidt-Thieme (2008). Ensembles of relational classifiers. *Knowl Inf Sys* (2008) 14:249-272.
- C. Preisach & L Schmidt-Thieme (2006). Relational Ensemble Classification. *ICDM'06*.
- X. Qi and B. D. Davison. Web Page Classification: Features and Algorithms. *ACM Computing Surveys*, in press. Accepted 2008.
- H. M. Richardson. Community of values as a factor in friendships of college and adult women. *Journal of Social Psychology*, 11:303–312, 1940.
- M. Richardson and P. Domingos. Markov logic networks. *Machine Learning*, 62(1/2):107–136, 2006.
- J. Rocchio. Relevance feedback in information retrieval. In G. Salton, editor, *The SMART Retrieval System: Experiments in Automatic Document Processing*, chapter 14, pages 313–323. Prentice–Hall, 1971.
- A. Rosenfeld, R. Hummel, and S. Zucker. Scene labeling by relaxation operations. *IEEE Transactions on Systems, Man and Cybernetics*, 6:420–433, 1976.

- L. J. Savage. *The Foundations of Statistics*. John Wiley and Sons, 1954.
- E. Segal, H. Wang, and D. Koller. Discovering molecular pathways from protein interaction and gene expression data. *Bioinformatics*, 19:I264–I272, Jul 2003a.
- E. Segal, R. Yelensky, and D. Koller. Genome-wide discovery of transcriptional modules from DNA sequence and gene expression. *Bioinformatics*, 19:I273–I282, Jul 2003b.
- U. Sharan and J. Neville. Exploiting Time-Varying Relationships in Statistical Relational Models. In *Proceedings of the 1st SNA-KDD Workshop, 13th ACM SIGKDD Conference on Knowledge Discovery and Data Mining*, 2007.
- L. Singh, L. Getoor, and L. Licamele (2005). Pruning social networks using structural properties and descriptive attributes, *Proc. of the 5th IEEE International Conference on Data Mining (Washington, DC, USA)*, IEEE Computer Society, 2005, pp. 773–776.
- Tom A.B. Snijders, Christian E.G. Steglich, and Michael Schweinberger. Modeling the co-evolution of networks and behavior. Pages 41-71 in *Longitudinal models in the behavioral and related sciences*, edited by Kees van Montfort, Han Oud and Albert Satorra; Lawrence Erlbaum, 2007.
- Steglich, C., Snijders, T.A.B., Pearson, M. Dynamic networks and behavior: Separating selection from influence. Mimeo University of Groningen, The Netherlands, 2004.
- A. Sundararajan, 2004a. Nonlinear Pricing and Type-Dependent Network Effects. *Economics Letters* 83, 107-113.
- A. Sundararajan, 2004b. Adoption Games in Networks: A Generalized Random Graph Model. Mimeo, New York University.
- A. Sundararajan, 2007a. Local Network Effects and Complex Network Structure. *Contributions to Theoretical Economics* 7(1).
- A. Sundararajan, 2007b. Network Seeding and Influence Diffusion. Mimeo, New York University.
- B. Taskar, P. Abbeel, and D. Koller. Discriminative probabilistic models for relational data. In *Proceedings of the Eighteenth Conference on Uncertainty in Artificial Intelligence (UAI)*, pages 485–492, 2002.
- B. Taskar, E. Segal, and D. Koller. Probabilistic classification and clustering in relational data. In *Proceedings of the Seventeenthth International Joint Conference on Artificial Intelligence (IJCAI)*, pages 870–878, 2001.
- B. Taskar, V. Chatalbashev, and D. Koller. Learning associative Markov networks. In *Proceedings of the Twenty-first International Conference on Machine Learning (ICML)*, 2004.
- Tucker, C., 2006. Interactive, Option-Value and Domino Network Effects in Technology Adoption. <http://www.mit.edu/people/cetucker/videomessaginglocal.pdf>
- K. Tumulty. Inside Bush’s Secret Spy Net [electronic version]. *Time*, 167(21), 2006. Retrieved May 25, 2006, from <http://www.time.com/time/archive/preview/0,10987,1194021,00.html>.
- V. N. Vapnik. The support vector method of function estimation. In J. Suykens and J. Vandewalle, editors, *Nonlinear Modeling: Advanced Black-Box Techniques*, pages 55–86. Kluwer, Boston, 1998a.
- V. N. Vapnik. *Statistical Learning Theory*. John Wiley, NY, 1998b.
- M. J. Wainwright and M. I. Jordan. Graphical models, exponential families, and variational inference. Technical Report 649, University of California, Berkeley, 2003.
- G. Winkler. *Image Analysis, Random Fields and Markov Chain Monte Carlo Methods*. Springer-Verlag, 2nd edition, 2003.
- I. H. Witten and E. Frank. *Data Mining: Practical Machine Learning Tools with Java Implementations*. Morgan Kaufmann, San Francisco, 2000.
- R. Xiang and J. Neville. Pseudolikelihood EM for Within-Network Relational Learning. In *Proceedings of the 2nd SNA Workshop, 14th ACM SIGKDD Conference on Knowledge Discovery and Data Mining*, 2008.
- X. Zhu, Z. Ghahramani, and J. Lafferty. Semi-supervised learning using Gaussian fields and

harmonic functions. In Proceedings of the Twentieth International Conference on Machine Learning (ICML), pages 912–919, 2003.