

## List of Publications

### Book

1. M.A.L.Thathachar and P.S.Sastry, 'Networks of Learning Automata: Techniques for Online Stochastic Optimization', Kluwer Academic Publishers, Boston, 2004.

### Journal Publications

1. A. Ibrahim, S. Sastry and P.S. sastry, 'Discovering Compressing Serial Episodes from Event Sequences', *Knowledge and Information Systems (KAIS)* Vol.47, pp.405-432, May 2016.
2. A. Ghosh, N. Manwani and P.S. Sastry, Making risk minimization tolerant to label noise, *Neurocomputing*, Vol.160, pp.93-107, 2015.
3. A. Achar and P.S. Sastry, Statistical Significance of episodes with general partial orders, *Information Sciences*, Vol.296, pp.175-200, 2015.
4. N. Manwani and P.S. Sastry, K-Plane Regression, *Information Sciences*, Vol.292, pp.39-56, 2015.
5. A. Achar, A. Ibrahim and P.S. Sastry, Pattern-growth based frequent serial episode discovery, *Data and Knowledge Engineering*, Vol.87, pp.91-108, Sept. 2013.
6. N. Manwani and P.S. Sastry, Noise tolerance under risk minimization, *IEEE Trans. Cybernetics*, Vol.43, No.3, pp.1146-1151, June 2013.
7. A. Achar, Srivatsan Laxman, V. Raajay and P.S. Sastry, Discovering injective episodes with general partial orders, *Data Mining and Knowledge Discovery*, Vol.25, No.1, pp.67-108, July 2012.
8. A. Achar, Srivatsan Laxman and P.S. Sastry, A unified view of the Apriori-based algorithms for frequent episode discovery, *Knowledge and Information Systems*, Vol.31, No.2, pp.223-250, May 2012.
9. N. Manwani and P.S. Sastry, Geometric decision tree, *IEEE Trans. Syst. Man and Cybern. Part B*, Vol.42, No.1, pp.181-192, Feb. 2012.
10. P.S. Sastry and K.P. Unnikrishnan, 'Conditional Probability based Significance Tests for Sequential Patterns in Multi-neuronal Spike Trains', *Neural Computation*, Vol.22, No.4, pp.1025-1059, 2010.

11. P.S. Sastry, G.D. Nagendra and N. Manwani, 'A Team of Continuous-Action Learning Automata for Noise Tolerant Learning of Half Spaces', *IEEE Transactions on Systems, Man and Cybernetics, Part B*, Vol.40, No.1, pp.19–28, 2010.
12. C. Diekman, P.S. Sastry and K.P. Unnikrishnan, 'Statistical Significance of Sequential Firing Patterns in Multi-Neuronal Spike Trains', *Journal of Neuroscience Methods*, Vol.182, pp.279–284, 2009.
13. K.K. Mamidisetty, M. Duan, Shivakumar Sastry and P.S. Sastry, 'Multipath dissemination in regular mesh topologies', *IEEE Transactions on Parallel and Distributed Systems*, Vol.20, No.8, pp.1188–1201, Aug. 2009.
14. Debprakash Patnaik, P.S. Sastry and K.P. Unnikrishnan, 'Inferring neuronal network connectivity from spike data: A temporal data mining approach', *Scientific Programming* (Special issue on Biological Data Mining), Vol.16, No.1, pp.49–77, 2008.
15. Srivatsan Laxman, P.S. Sastry and K.P. Unnikrishnan, 'Discovering frequent generalized episodes when events persist for different durations', *IEEE Trans. Knowledge and Data Engineering*, Vol.19, No.9, pp.1188–1201, Sept. 2007.
16. Shesha Shah and P.S. Sastry, 'A Feedback-based algorithm for motion analysis with application to object tracking', *EURASIP J. Advances in Signal Processing*, 2007.
17. K.P. Unnikrishnan, N. Ramakrishnan, P.S. Sastry and R. Uthurusamy, 'Network Reconstruction from dynamic data', *SIGKDD Explorations*, Vol.8, No.2, pp.90-91, 2006.
18. T.P. Imthias Ahamed, P.S. Nagendra Rao and P.S. Sastry, 'A neural network based automatic generation control design through reinforcement learning', *International Journal of Emerging Electrical Power Systems*, Vol.16, No.1, 2006.
19. Srivatsan Laxman and P.S. Sastry, 'A Survey of Temporal Data mining', *Sadhana*, Vol.31, No.2, pp.173–198, April, 2006.
20. Imthias Ahamed, P.S. Nagendra Rao and P.S. Sastry, 'Reinforcement learning controllers for automatic generation control in power systems having re-heat units with GRC and dead-bands', *International Journal of Power and Energy Systems*, Vol.26, No.2, pp.137–146, 2006.
21. Srivatsan Laxman, P.S. Sastry and K.P. Unnikrishnan, 'Discovering Frequent Episodes and Learning Hidden Markov Models: A Formal Connection', *IEEE Trans Knowledge and Data Engineering*, Vol.17, pp.1505-1517, 2005.
22. S. Shah and P.S. Sastry, 'Finger Print classification using a feedback based Line Detector', *IEEE Trans. Syst., Man and Cybern. Part:B*, Vol.34, pp. 85–94, Feb. 2004.

23. M.A.L.Thathachar and P.S.Sastry, 'Varieties of Learning Automata: An Overview', *IEEE Trans. Syst., Man and Cybern., Part B*, Vol.32, pp. 711–722, 2002.
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31. Uma Ranjan, V.S.Borkar and P.S.Sastry, 'Edge Detection through a Time-homogeneous Markov Chain', *J. Indian Institute of Science*, Vol.78, pp.31-43, Jan. 1998.
32. G.Santharam and P.S.Sastry, 'A Reinforcement Learning Neural Network for Adaptive Control of Markov Chains', *IEEE Trans Syst., Man and Cybern., Part A*, Vol.27, No.5, pp.588-600, Sept. 1997.
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36. V.V.Phansalkar and P.S.Sastry, 'Analysis of Backpropagation with Momentum', *IEEE Trans Neural Networks*, Vol.5, pp.505-506, May 1994.
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## Book Chapters

1. P.S. sastry and N. Manwani, 'Robust Learning of Classifiers in the Presence of Label Noise', in S.K. Pal and A. Pal (Eds.), 'Pattern Recognition and Big data', World Scientific, 2017.
2. P.S.Sastry, 'An Introduction to Support Vector Machines', in J.C.Misra (Ed.), *Computing and Information Sciences: Recent Trends*, (One of the set of books published on the occasion of Golden Jubilee of IIT, Kharagpur), pp.52-84, Narosa Publishing, New Delhi, 2002.
3. M.A.L.Thathachar and P.S.Sastry, 'Adaptive Stochastic Algorithms for Pattern Classification', in S.K.Pal and A.Pal (Eds.), *Pattern Recognition: From Classical to Modern Approaches*, pp.67-113, World Scientific, Singapore, 2001.
4. P.S.Sastry, 'Machine Learning', in V.V.S.Sarma et al (Eds.), *Artificial Intelligence and Expert System Technologies in in the Indian Context: Vol.1*, Tata McGraw-Hill, New Delhi, 1991.

## Patents

1. P.S.Sastry, Srivatsan Laxman and K.P.Unnikrishnan, ‘System and Method for Temporal Data mining’, US Patent No. 7644079, issued on 5 Jan., 2010.
2. P.S.Sastry, Srivatsan Laxman and K.P. Unnikrishnan, ‘System and Method for mining Temporal Data’, US Patent No. 7644078, issued on 5 Jan., 2010.
3. K.P. Unnikrishnan, Basel Q. Shadid, P.S. Sastry and Srivatsan Laxman, ‘Root Cause Diagnostics using Temporal Data Mining’, US Patent No. 7509234, issued on 24 March 2009.

## Conference Papers

1. Suresh Kirthi K., K.R. Ramakrishnan and P.S. sastry, ‘Bank of Weight Filters in CNNs: A Case for Life Long Learning with Memory’, Inaugural Conference on Cognitive Computational Neuroscience, Columbia University, New York City, 6-8 Sept. 2017.
2. A. Gupta, G. Gurralla and P.S. sastry, ‘Instability Prediction in Power Systems using Recurrent Neural Networks’. 26th Int. Joint Conference on Artificial Intelligence (IJCAI-2017), Melbourne, Australia, 19–25 Aug. 2017.
3. A. Ghosh, N. Manwani and P.S. Sastry, ‘On the Robustness of Decision Tree Learning under Label Noise’, 21st Pacific Asia Conference on Knowledge Discovery and Datamining (PAKDD-2017), Jeju, South Korea, 23–26 May, 2017.
4. A. Ghosh, H. Kumar and P.S. Sastry, ‘Robust loss functions under label noise for deep neural networks’, Thirty-First AAAI Conference on Artificial Intelligence (AAAI-2017), San Francisco, USA, 4–9 Feb. 2017.
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6. Ibrahim A., P.S. Sastry and S. sastry, ‘Analyzing similarities of datasets using a Pattern Set kernel’, 20th Pacific Asia Conference on Knowledge Discovery and Datamining (PAKDD-2016), Auckland, New Zealand, Apr. 19-22, 2016.
7. Vidyadhar Upadhyay and P.S. Sastry, ‘Empirical Analysis of Sampling Based Estimators for Evaluating RBMs’, 22nd International Conference on Neural Information Processing (ICONIP-2015), Istanbul, Turkey, Nov. 9-12, 2015.
8. A. Ibrahim, P.S. sastry and S. sastry, ‘Pattern Set Kernel’, *Second IKDD Conference on Data Sciences (CoDS2015)*, Bangalore, March 18–21, 2015.

9. S. sastry, M. Branicky and P.S. Sastry, Cloud conveyor system a versatile abstract application for exploring cyber physical systems, presented at *Workshop on Control of Cyber Physical Systems*, Johns Hopkins University, March 2021, 2013.
10. Naresh Manwani, P. S. Sastry, Polyceptron A Polyhedral Learning Algorithm, presented at the *Centenary Conference - EE, IISc*, Dec. 1517, 2011.
11. Chandana Cheerala, Shivakumar Sastry, P.S. Sastry, Learning Automata based Online Input-rate Control for Composable Conveyor Systems, presented at the *Centenary Conference - EE, IISc*, Dec. 1517, 2011.
12. Avinash Achar, Ibrahim A., P. S. Sastry, Apriori-based Episode Discovery under Interval Span constraints, presented at the *Centenary Conference - EE, IISc*, Dec. 1517, 2011.
13. N. Manwani and P.S. Sastry, ‘Learning Polyhedral Classifiers using logistic function’, presented at *Asian Conference on Machine Learning (ACML2010)*, Tokyo, 7–9 Nov., 2010.
14. N. Manwani and P.S. Sastry, ‘A geometric Algorithm for learning Decision trees’, presented at PReMI’09, *Third Int. Conf. on Pattern Recognition and Machine Intelligence*, New Delhi, Dec. 16–19, 2009.
15. Debprakash Patnaik, P.S. Sastry and K.P. Unnikrishnan, ‘Data mining schemes for discovering functional connectivity patterns for multi-neuronal spike trains’, Presented at *SAND4, 4<sup>th</sup> Int Workshop on Statistical Analysis of Neuronal Data*, Pittsburgh, USA, May 2008.
16. Casey Diekman, P.S. Sastry and K.P. Unnikrishnan, ‘ Using correlation counts to infer relative strengths of functional connectivity in multi-neuronal spike trains’, Presented at *SAND4, 4<sup>th</sup> Int Workshop on Statistical Analysis of Neuronal Data*, Pittsburgh, USA, May 2008.
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