

## 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.
24. P.S.Sastry, M.Magesh, K.P.Unnikrishnan, 'Two Time Scale Analysis of the Alopex Algorithm for Optimization', *Neural Computation*, Vol. 14, No. 11, pp.2729–2750, 2002.
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28. K.Rajaraman and P.S.Sastry, 'Stochastic Optimization over Continuous and Discrete Variables with Applications to Concept Learning under Noise', *IEEE Trans. Syst., Man and Cybern., Part A*, Vol.29, No.6, pp.542–553, Nov. 1999.
29. P.S.Sastry and M.A.L.Thathachar, 'Learning Automata Algorithms for Pattern Classification', *Sadhana*, Vol.24, Parts 4&5, pp.261-292, 1999.
30. P.S.Sastry, S.Shah, S.Singh and K.P.Unnikrishnan, 'Role of feedback in Mammalian Vision: A New Hypothesis and a Computational Model' *Vision Research*, Vol.39, pp.131-148, Jan 1999.
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.
33. K.Rajaraman and P.S.Sastry, 'A Parallel stochastic Algorithm for Learning Logic Expressions under Noise', *J. Indian Institute of Science*, Vol.77, pp.15-45, Jan-Feb 1997.
34. K.Rajaraman and P.S.Sastry, 'Finite Time Analysis of the Pursuit Algorithm for Learning Automata', *IEEE Trans Syst., Man and Cybern.*, Vol.26, pp.590-598, Aug. 1996.

35. G.Santharam, P.S.Sastry and M.A.L.Thathachar, 'Continuous Action Set Learning Automata for Stochastic Optimization', *J. Franklin Institute*, Vol.331B, No.5, pp.607-628, 1994.
36. V.V.Phansalkar and P.S.Sastry, 'Analysis of Backpropagation with Momentum', *IEEE Trans Neural Networks*, Vol.5, pp.505-506, May 1994.
37. P.S.Sastry and M.A.L.Thathachar, 'Analysis of Stochastic Automata Algorithm for Relaxation Labelling', *IEEE Trans Pattern Anal. Machine Intell.*, Vol.16, pp.538-543, May 1994.
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39. P.S.Sastry, G.Santharam and K.P.Unnikrishnan, 'Memory Neuron Networks for Identification and Control of Dynamical systems', *IEEE Trans Neural Networks*, Vol.5, pp.306-319, March 1994.
40. V.V.Phansalkar, P.S.Sastry and M.A.L.Thathachar, 'Absolutely Expedient algorithms for Learning Nash Equilibria' *Proc. Indian Academy of Sciences (Mathematics)*, Vol.104, pp.279-294, Feb 1994.
41. P.S.Sastry, K.Rajaraman and S.R.Ranjan, 'Learning optimal conjunctive Concepts through a team of Stochastic Automata', *IEEE Trans Syst., Man and Cybern.*, Vol.23, pp. 1175-1184, July-August, 1993.
42. K.Kumar, A.G.Menon and P.S.Sastry, 'Computer Assisted Determination of Elemental Composition of Fragments in Mass Spectra', *Rapid Comm. Mass Spectrometry*, Vol.6, pp.585-591, Sept. 1992.
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47. K.Banerjee, P.S.Sastry, K.R.Ramakrishnan and Y.V.Venkatesh, 'An SIMD Machine for Low level Vision', *Information Sciences*, Vol. 44 (Spl. Issue on Parallel Processing), pp.19-50, 1988.
48. M.A.L.Thathachar and P.S.Sastry, 'A Hierarchical System of Learning Automata that can Learn the Globally Optimal Path', *Information Sciences*, Vol. 42, pp. 143-166, July 1987.
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50. M.A.L.Thathachar and P.S.Sastry, 'Relaxation Labelling with Learning Automata', *IEEE Trans. Pattern Anal. and Machine Intell.*, Vol. PAMI-8, pp 256-268, Mar. 1986
51. M.A.L.Thathachar and P.S.Sastry, 'A New Approach to Designing Reinforcement Schemes for Learning Automata', *IEEE Trans. Syst., Man and Cybern.*, Vol. SMC-15, pp 168-175, Jan. 1985.

## 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.