

## Research interests

### Bayesian nonparametrics

Dependent nonparametric models, MCMC methods and deterministic approximations for efficient inference in nonparametric models

### Markov jump processes

MCMC methods for inference in Markov jump processes and continuous time Bayesian networks

## Education

### September 2007 - present

PhD student at the Gatsby Unit, UCL

### June 2007

MS in Electrical Engineering, Syracuse University, GPA : 4.0/4.0

### August 2003

BE in Electronics and Telecommunication, University of Pune, Result : First Class

## Publications

Gaussian process modulated renewal processes. Rao,V.A. and Teh, Y.W. *Advances in Neural Information Processing Systems 24*

Fast MCMC inference for Markov jump processes and continuous time Bayesian networks. Rao,V.A. and Teh, Y.W. *The 27th Conference on Uncertainty in Artificial Intelligence*

Spatial normalized Gamma processes. Rao,V.A. and Teh,Y.W. *Advances in Neural Information Processing Systems 22*

Retrieved context and the discovery of semantic structure. Rao,V.A. and Howard,M.W. *Advances in Neural Information Processing Systems 20*

Bridging the gap: Transitive associations between items presented in similar temporal contexts. Howard,M.W., Jing,B, Rao,V.A., Provyn,J.P. and Datey,A.V. *Journal of Experimental Psychology: Learning, Memory, and Cognition, Vol 35(2)*

## Talks

Efficient MCMC for continuous time discrete state systems, Machine Learning Group, Dept. of Engineering. Cambridge University, UK, November 2011

Efficient MCMC for continuous time discrete state systems, Dept. of Computer Science. Brown University, USA, October 2011

Spatial normalized random measures, 8th workshop on Bayesian nonparametrics, Veracruz, Mexico, July, 2011

**Talks (contd.)**

Expectation Propagation for Dirichlet process mixture models, Machine Learning Group, Dept. of Engineering, Cambridge University, UK, August 2010

Contextual retrieval in semantic memory: Building Semantic spaces with TCM, Society for Mathematical Psychology, 40th Annual Meeting, 2007

**Awards:**

Bogue research fellowship: to work with David Dunson at Duke University (2 months) and Erik Sudderth at Brown University (2 weeks)

Outstanding student in Electrical Engineering, Syracuse University, 2007

**Teaching:**

Teaching Assistant for “Adaptive Modelling of Complex Data”, University College London, 2009

Teaching Assistant for “Unsupervised Learning”, Gatsby Unit, UCL, 2008

Teaching Assistant, Department of Physics, Syracuse University, Spring 2007

**Work experience**

**Syracuse University, NY**  
Research Assistant

August 2005 - May 2007

**Paxonet Comm. Inc., India (now Conexant Systems)**  
Design Engineer

August 2003 - July 2005

**Reviewing:**

IEEE Trans. Pattern Analysis and Machine Intelligence, Neural Information Processing Systems, International Conference on Machine Learning, International Joint Conferences on Artificial Intelligence, AISTats

**Programming languages**

C/C++, Matlab, Perl