

# Rohit Kumar Patra

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## EDUCATION

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### Columbia University, New York, USA

PhD, Statistics; GPA 4.0/4.0

Expected May 2015

### Indian Statistical Institute, Kolkata, India

M.Stat. & B.Stat., with distinction

July 2010

#### Selected courses:

Stochastic Processes, Survival Analysis, Bayesian Nonparametrics, Experimental Design, Computational Probability, Foundations of Optimization, Heavy Tail Analysis and Modeling, Multivariate Analysis

## RESEARCH EXPERIENCE

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### Research Assistant

Columbia University, New York, USA

April 2012 – Present

- Developing techniques to non-parametrically estimate convex link function in generalized regression

Columbia University, New York, USA

Sept 2010 – April 2012

- Designed and implemented computational techniques to identify signal component in mixture models
- Established and proved asymptotic properties of estimator of mixing proportion

### Intern

Summer 2012

Cambridge University, Cambridge, UK

- Investigated theoretical and small-sample properties of likelihood ratio estimators for mixture models

## AWARDS AND RECOGNITIONS

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### Invited Speaker

Spring 2013

Minghui Yu Memorial Conference, Columbia University, USA

- Presentation of research on estimation in a two-component mixture model

### Outstanding Student Award

Spring 2009

Indian Statistical Institute, Kolkata, India

- Award for exceptional performance in first year of M.Stat. program

### National Initiative on Undergraduate Science Fellowship

Summer 2006

Homi Bhabha Center for Science Education, Mumbai, India

- Scholarship to encourage undergraduate research; awarded to 35 students nationally

### Young Scientist Encouragement Program

Sept 2005 – July 2010

Department of Science and Technology, Government of India

- Highly prestigious scholarship awarded to 40 promising undergraduates in the sciences

### Merit Scholarship

2005

Central Board of Secondary Education, Government of India

- Ranked 2<sup>nd</sup> in state and 379<sup>th</sup> in country on All-India engineering entrance examination

## PUBLICATIONS AND PROJECTS

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- **Patra R.** and Sen, B. (2013). Estimation in a Two-Component Mixture Model with Applications to Multiple Testing (Submitted).
- Liu J., Zhou X., **Patra R.**, and Weinan E. (2011) Failure of Random Materials: A Large Deviation and Computational Study. *Proceedings of the 2011 Winter Simulation Conference*.
- **Patra R.**, Mandal A., Basu A. (2008) Minimum Hellinger Distance Estimation With Inlier Modification, *Sankhya*, 70B, 310-322.
- **B.Stat. Capstone Project:** *Estimation of tariff choice probabilities for mobile devices*. (2008) Analyzed mobile plan choice probabilities in the presence of migration and incomplete data using EM algorithm

## TECHNICAL SKILLS

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- R, MatLab, C, LaTeX, UNIX