Soudeep Deb

Contact

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Citizenship Indian

Research Interests Time series data, Spatio-temporal modeling, Spatial statistics, Inference for random processes, Application of statistics in sports.

Education

University of Chicago, Chicago, IL, USA.

Ph.D., Statistics Aug 2018 (expected)

- Thesis: Irregular spaced random field, Spatio-temporal data and Clustering of time series
- Advisor: Dr. Wei Biao Wu
- Other committee members: Dr. Ruey S. Tsay and Dr. Michael L. Stein

Indian Statistical Institute, Kolkata, WB, India.

Master of Statistics (M. Stat.) May 2013

- First Division with Distinction
- Specialization: Mathematical Statistics and Probability
- Dissertation: Association analysis for identifying rare genetic variants
- Advisor: Dr. Saurabh Ghosh

Bachelor of Statistics (B. Stat.) May 2011

- First Division with Distinction

Honors

University of Chicago:

- International House Ralph W. Nicholas Fellowship Award 2017-18
- Graduate Council Travel Fund Award 2017
- Senior Consultant, Department of Statistics 2016-17
- Runner-up for Department of Statistics Consulting Award 2016
- Nominated for Best Teaching Assistant in Physical Sciences Division Winter 2014

Other Awards:

- Kishore Vaigyanik Protsahan Yojana scholarship, Indian Institute of Science 2007 to 2013
- Selected for International Mathematical Olympiad Training Camp, India 2007 & 2008

Teaching Experience

Instructor, at University of Chicago:

- Introductory Statistics, Chicago Academic Achievement Program. Summers of 2015, 2017
- Statistical Models and Methods I Winter 2015

Teaching Assistant, at University of Chicago:

- Statistical Theory and Methods I Winter 2014, Autumns of 2014, 2016, 2017
- Bayesian Analysis and Principles of Statistics Spring 2017
- Statistical Theory and Methods II Springs of 2014, 2016
- Applied Linear Statistical Methods Autumn 2015

Publications and ongoing research

1. **Deb, S.**, Tsay, R. S.; Spatio-temporal Models with Space-time Interaction and Their Applications to Air Pollution Data; In preparation.
2. **Deb, S.**, Wu, W. B.; Clustering of Time Series Data using Spectral Density Estimates; In preparation.
3. **Deb, S.**, Pourahmadi, M., Wu, W. B. (2017); An Asymptotic Theory for Spectral Analysis of Random Fields; Electronic Journal of Statistics, Vol. 11, No. 2, 4297-4322.
4. **Deb, S.** (2017); VAR model based clustering method for multivariate time series data; In XXXIV. International Seminar on Stability Problems for Stochastic Models (p. 28).
5. **Deb, S.**, Dey, D. (2017); Spatial Modeling of Shot Conversion in Soccer to Single out Goalscoring Ability; Under review, Preprint: https://arxiv.org/abs/1702.05662.
6. Chazin, H., **Deb, S.**, Falk, J., Srinivasan, A. (2017); New Statistical Approaches to Intra-individual Isotopic Analysis and Modeling Birth Seasonality in Studies of Herd Animals; Under revision, Archaeometry.
7. Prickett, K.C., Guiterrez, C., **Deb, S.**; U.S. Family Firearm Ownership and Firearm-Related Child Mortality from 1976 to 2014, In preparation.
8. Zechner, C., **Deb, S**., Koeppl, H. (2013); Marginal Dynamics of Stochastic Biochemical Networks in Random Environments; In Control Conference (ECC), 2013 European (pp. 4269-4274). IEEE.
9. Ghosh, S., **Deb, S.** (2013), A Clustering Approach for Mapping Rare Variants Based in Mutual Association. Human Heredity, Vol. 76, No. 2, pp. 98-98.

Research Experience

Instituto de Pesquisa Ambiental do Amazônia, Brasília, Brazil — Jun - Aug 2016

- Position: Summer fellow.
- Project: Hydropower Construction and Deforestation in the Tapajós River Basin: Linking Forest Cover to Changes in Water Balance.

Eidgenossische Technische Hochschule (ETH), Zurich, Switzerland — May - Jul 2013

- Position: Summer research intern.
- Project: Moment-Closure Approximations for Mass-action Models in Chemical Kinetics.

Eidgenossische Technische Hochschule (ETH), Zurich, Switzerland — Jun - Jul 2012

- Position: Summer research intern.
- Project: Marginal Dynamics of Stochastic Biochemical Networks in Random Environments.

Ministry of Statistics and Programme Implementation, Govt. of India — May 2012

- Position: Team member
- Project: Forecasting of Foreign-tourist Arrivals in India.

Johns Hopkins University, Baltimore, United States of America — May - Jul 2011

- Position: Summer research intern
- Project: Estimating the Genetic Relationship between two Random Individuals from Genome Sequence Data.

Presentations

1. (Contributed talk) VAR model based clustering method for multivariate time series data. XXXIV. International Seminar on Stability Problems for Stochastic Models, Debrecen, Hungary. Aug 2017
2. (Contributed talk) Spatio-temporal Models with Space-time Interaction and Their Applications to Air Pollution Data. NBER/NSF Time Series Conference, New York, USA. Sep 2016
3. (Invited talk) Hydropower Construction and Deforestation in the Tapajós River Basin: Linking Forest Cover to Changes in Water Balance. Symposium on deforestation, Ministry of Environment, Brasília, Brazil. Aug 2016

4. (Poster) Estimating the Genetic Relationship between two Random Individuals from Genome Sequence Data. Young Statisticians Conference, Melbourne, Australia. Feb 2013

5. (Contributed talk) Estimating the Genetic Relationship between two Random Individuals from Genome Sequence Data. Conference on Contemporary Issues and Applications in Statistics, Kolkata, India. Jan 2012

6. (Invited talk) Estimating the Genetic Relationship between two Random Individuals from Genome Sequence Data. D. Basu Memorial Award Lecture Series, Indian Statistical Institute, Kolkata, India. Sep 2011

Other information

Technical strength:

- R, MATLAB, Python, C, LaTeX, Microsoft Office.

Languages:

- Fluent in reading, writing, speaking: English, Bengali, Hindi.
- Basic reading and speaking: Portuguese.