

Subhabrata Majumdar

Address: (612) 806-9996
1112 8th Street SE Apt 7 zoom.subha@gmail.com
Minneapolis, MN 55414 <http://stat.umn.edu/~majum010>

Education

Qualifications

PhD Statistics, University of Minnesota - Twin Cities,
Fall 2012 - present (*expected Spring 2017*).

M.S. Statistics, Indian Statistical Institute, 2012.
(Specialization: Actuarial science and Genetics)
Masters thesis: Adjusting for Treatment Effects in Studies of Quantitative Traits

B.S. Statistics, Indian Statistical Institute, 2010.

Courses

Theory of statistics, linear algebra, real and complex analysis, measure theory, stochastic processes;
Regression methods, design of experiments, machine learning, statistical computing, statistics in climate science;
Statistics in human genetics, computational techniques in human genomics, mathematical biology, survival analysis.

Skills

R, Matlab, Stata, Mathematica; C/C++, SQL; Microsoft office, LaTeX, HTML.

Awards

University of Minnesota School of Statistics travel award, 2014.

KVPY national fellowship, Department of Science and Technology, Govt. of India, 2008 – 2012.

National scholar, National Council of Educational Research and Training, Govt. of India, 2005 – 2008.

Best Project award in state-level conference of the Association of Surgeons in India, 2011.

Employment

Data Science for Social Good fellowship, University of Chicago. June 2014 – Aug 2014.

Worked in a team that collaborated with the Chicago Department of Public Health in building a predictive model for lead poisoning prevention in the city of Chicago using data on previous testing and house inspections.

National Marrow Donor Program, Minneapolis, MN.
Statistician Intern, Bioinformatics division, June 2013 – Aug 2013.

Collaborated with scientists at the Bioinformatics division of NMDP and Prof. Snigdhasu Chatterjee of the School of Statistics at UofM in designing a spatial algorithm for data-driven marrow donor recruitment for Leukemia patients with rare alleles.

Educational Initiatives, Bangalore, India.

Summer Intern, June 2011 – July 2011,

Worked with staff statisticians to analyze educational survey data on teacher aptitude collected by four state governments in India as well as govts. of Nepal and Bhutan.

Saha Institute of Nuclear Physics, Kolkata, India.

Undergraduate Research Associate in biophysical sciences, Jan 2008 – June 2010.

Research

Interests

Robust statistics: Multivariate quantiles and statistical depth functions, depth-based robust estimators;

Predictive analytics: Big data and high-dimensional models in statistical chemistry and public health;

High-dimensional statistics: Dimension reduction, application in human genomics.

Journal Articles

Adapting Interrelated Two-Way Clustering Method for Quantitative Structure-Activity Relationship (QSAR) Modeling of Mutagenicity/ Non-Mutagenicity of a Diverse Set of Chemicals. *Current Computer-Aided Drug Design*, **2013**, 9, 463–471 (first author, with 2 authors).

(Submitted) Predictive Modeling for Public Health: Preventing Childhood Lead Poisoning. *21st ACM SIGKDD Proceedings* (with 9 authors).

(In preparation) Robust estimation of principal components from depth-based multivariate rank covariance matrix (first author, with S. Chatterjee).

Conference presentations

(Upcoming) ASA Joint Statistical Meetings, Seattle, WA: Aug 2015.

20th ACM SIGKDD conference on Knowledge Discovery and Data Mining, New York City, NY: Aug 2014.

ASA Joint Statistical Meetings, Boston, MA: Aug 2014.