

Naveen N. Narisetty

PhD Candidate, University of Michigan

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Research Interests

High Dimensional Data, Model Selection, Bayesian Computation, Functional Data, Data Depth, Large-Scale Computer Models, Quantile-based Inference, Censored Data

Education

- 2011–2016 **Ph.D in Statistics**, University of Michigan, Ann Arbor, MI.
Advisors: Professors [Xuming He](#) and [Vijay Nair](#)
- 2011–2012 **Master of Arts in Statistics**, University of Michigan, Ann Arbor, MI.
- 2008–2010 **Master of Statistics (with Distinction)**, Indian Statistical Institute, Kolkata.
Specialization: Mathematical Statistics and Probability
- 2005–2008 **Bachelor of Statistics (Hons.)**, Indian Statistical Institute, Kolkata.

Honors and Awards

From University of Michigan, Ann Arbor:

- 2015-2016 Rackham Predoctoral Fellowship, Rackham Graduate School.
- 2014-2015 Excellence in Teaching Award, Department of Statistics.
- 2013-2015 Rackham Conference Travel Awards, Rackham Graduate School.
- March 15 Second Best Oral Presentation, Michigan Student Symposium for Interdisciplinary Statistical Sciences (MSSISS).
- 2011-2012 Outstanding First Year Ph.D Student Award, Department of Statistics.
- 2011-2012 First Year Fellowship, Department of Statistics.
- Winter 12 Best Presentation Award, Research Appreciation in Statistics (Stats 700).

From American Statistical Association:

- JSM 2015 Best Student Paper Award, Nonparametric Statistics Section.
- JSM 2014 Student Paper Competition Winner, Statistical Learning and Data Mining Section.
- July 2014 Conference Travel Award, International Indian Statistical Association Conference 2014.

Other Scholarships:

- June 2015 QPRC Scholarship, Quality and Productivity Research Conference.
- 2013-2015 Student Travel Awards, National Science Foundation.
- April 2013 Travel Scholarship, Statistical Methods for Atmospheric and Oceanic Sciences.
- June 2011 Debesh Kamal Merit Scholarship for Studying Abroad, Ramakrishna Mission Institute of Culture, Kolkata.
- 2007-2010 Multiple Scholarships for Academic Excellence, Indian Statistical Institute, Kolkata.

Current Research

Bayesian Model Selection in High Dimensional Settings

Advisor: Prof. Xuming He

Research involves developing and studying properties of Bayesian methods and scalable algorithms for model selection in linear regression, generalized linear models, and quantile models for censored data.

Nonparametric Approaches to Functional Data, and Computational Models

Advisor: Prof. Vijay Nair

Research deals with: a) novel notions of depth for functional data, their properties and applications to simultaneous functional inference, and b) spline and regression-based methods as statistical emulators, and their uncertainty quantification with applications in global climate models.

Interdisciplinary Research

Medical Research

2015-2016

Collaborators: Prof. Steven Broglio and James Eckner, M.D.

Studying reliability of a new technique for quantifying Brain Network Activation (BNA) patterns for brain concussion in athletes

Atmospheric Oceanic and Space Sciences

2013-2015

Collaborators: Prof. Derek Posselt and Fei He

Involved developing and studying statistical emulators for tropical cyclones in climate models.

Credit Risk at Ford Company

2012-2014

Collaborator: Dr. Chas Gastineau

Modeling credit risk, default, and payoff rates of car loans with censored data.

Health Communications Research

2011-2013

Collaborator: Lawrence An, M.D.

Analysis of data from a web-based intervention study to reduce smoking by young adults.

Teaching Experience

Graduate Student Instructor

2011, 2014

Introduction to Statistics and Data Analysis (Stats 250) - Fall 2011

Introduction to the Design of Experiments (Stats 470) - Fall 2014

Qualifying Exam Tutor for PhD Students

2013-2015

Department tutor for PhD students to prepare for theory qualifying review (QR) exam. This involved a weekly review of topics and problems in graduate level statistical theory.

[Excellence in Teaching Award](#) (2014-2015) for the teaching in Stats 470 and QR study group.

Practical Experience

Risk Analyst, Nomura Financial Services

2010-2011

Statistical modeling to assess market risk of portfolios and to understand the relation between securities lending business and stock market.

Volunteer Experience

President, Association for India's Development (AID), Ann Arbor

2014, 2015

AID is a US registered 501(c)(3) non-profit organization that helps the underprivileged in India.

Volunteer, Rackham Graduate School Volunteer Corps, University of Michigan

Winter 2015

Papers in Publication

Narisetty, N.N., Nair, V.N. (2015). Extremal Notion of Depth for Functional Data and Applications. *To appear in Journal of the American Statistical Association (Theory & Methods)*.

Winner of Nonparametric Section Student Paper Award.

Narisetty, N.N., He, X. (2015). Discussion of "Multivariate Functional Outlier Detection". **Statistical Methods and Applications**. 24 (2) 209-216

Narisetty, N.N., He, X. (2014). Bayesian Variable Selection with Shrinking and Diffusing Priors. **Annals of Statistics** 42 (2) 789-817

Winner of SLDM Student Paper Award; Also chosen for SBSS Student Paper Award

Tait, A.R., Lewis, T.V., Nair, V.N., **Narisetty, N.N.**, Fagerlin, A. (2013). Informing the Uninformed: Optimizing the Consent Message Using a Fractional Factorial Design. **JAMA Pediatrics** 1-7

An, L.C., Demers, M., Kirch, M., Nair, V.N., Dasgupta, K., **Narisetty, N.N.**, Resnicow, K. (2013). Efficacy of Providing Individually Tailored Smoking Cessation Messages for Young Adults. **JNCI Monographs** 209-215

Papers in Review

Narisetty, N.N., Shen, J., He, X. (2015). Scalable and Consistent Variable Selection for High Dimensional Logistic Regression. *Submitted to Annals of Statistics*.

Eckner, J. T., Rettman, A., **Narisetty, N.N.**, Greer, J., Moore, B., Brimacombe, S., He, X., Broglio, S. P. (2015). Stability of an ERP-Based Measure of Brain Network Activation in Athletes: A New Electrophysiological Assessment Tool for Concussion. *Submitted to Clinical Journal of Sports Medicine*

He, F., Posselt, D.J., **Narisetty, N.N.**, Zarzycki, C.M., Nair, V.N. (2015). Sensitivities of the AGCM-Simulated Tropical Cyclones to Varying Initial Conditions. *American Geophysical Union Fall Meeting*

Broglio, S.P., Pettman, A., Greer, J., Brimacombe, S., Moore, B., **Narisetty, N.N.**, He, X., Eckner, J.T. (2015). Investigating a Novel Measure of Brain Networking Following Sport Concussion. *Submitted to Brain Injury*

Papers in Preparation

Narisetty, N.N., He, X. High Dimensional Variable Selection for Censored Quantile Regression with Nonconvexity.

Zhang, Z., **Narisetty, N.N.**, Nair, V.N., Zhu, J. Calibration of Computer Models with Expanded Multivariate Adaptive Regression Splines.

Narisetty, N.N., Mukherjee, B. Identification of Non-linear Interaction Effects between Environmental Exposures.

Yang, X., **Narisetty, N.N.**, He, X. Efficient Imputation for Missing Data using Quantile Autoregressive Time Series Models.

Presentations

Invited Talks and Seminars:

- Department of Statistics, University of Michigan (2015, Ann Arbor, MI)
- World Statistics Congress (2015, Rio de Janeiro, Brazil)
- Quality & Productivity Research Conference (2015, Raleigh, NC)
- Seminar of the Shanghai Center of Mathematical Sciences (joint with the Department of Statistics), Fudan University (2015, Shanghai, China)
- Department Colloquium, Department of Statistics and Probability, Michigan State University (2014, East Lansing, MI)
- Midwest Statistics Research Colloquium (2014, Chicago, IL)
- International Conference on Statistics and Society in the New Information Age: Challenges and Opportunities (2014, Colombo, Sri Lanka)
- Department Seminar, Statistics and Mathematics Unit, Indian Statistical Institute (2013, Kolkata)

Student Paper Award Talks:

- Joint Statistical Meetings (2015, Seattle, WA)
- Joint Statistical Meetings (2014, Boston, MA)

Other Presentations:

- Invited Poster, JSM (2015, Seattle, WA)
- Oral Presentation, MSSISS (2015, Ann Arbor, MI)
- Poster Presentation, NSF Conference on Statistics for Complex Systems (2015, Madison, WI)
- Poster Presentation, Robust Rank Based Conference (2015, Kalamazoo, MI)
- Student Talk, International Indian Statistical Association Conference (2014, Riverside, CA)
- Contributed Talk, JSM (2013, Montreal, Canada)

Professional Service

Reviewer:

Journal of the American Statistical Association (11 papers)	Bayesian Analysis (2)
Journal of the Royal Statistical Society (1)	Journal of Multivariate Analysis (1)
Journal of Computational and Graphical Statistics (1)	Statistica Sinica (1)
SIAM/ASA Journal on Uncertainty Quantification (1)	International Statistical Review (1)

Webmaster:

International Society for Business and Industrial Statistics, 2013 - 2015

Conference Co-organizer:

Co-organized Michigan Student Symposium for Interdisciplinary Statistical Sciences 2014

Conference Session Organizer:

Invited Paper Session on Modeling and Analysis of Functional Data, World Statistics Congress 2015
Special Topics Session on Bayesian Computation, ISBA World Meeting 2016

Roundtable Discussion Leader:

Bayesian Computation for High Dimensional Data, JSM 2015

Session Chair:

JSM 2014, JSM 2013

Student Assistant:

Extreme Value Analysis Conference, Ann Arbor, 2015