

Curriculum Vita

ASHIS K GANGOPADHYAY

Address Department of Mathematics and Statistics
Boston University
111 Cummington Street
Boston, MA 02215
Telephone: (617) 353-9544
Email: ag@math.bu.edu

Current Position Associate Professor of Mathematics and Statistics (tenured)
Associate Chairman
Department of Mathematics and Statistics
Boston University

EDUCATION

1983-1987 Ph.D. in Statistics; June, 1987.
University of California at Davis.
Ph.D. Thesis: Nonparametric estimation of a conditional quantile function.

1981-1983 M. Stat. (equivalent to M.S. in Statistics)
Indian Statistical Institute; Calcutta, India.

1978-1981 B. Stat. (equivalent to B.S. in Statistics)
Indian Statistical Institute; Calcutta, India.

JOURNAL EDITOR: Consulting editor of the Journal of Education for Business.

PUBLICATIONS

Gangopadhyay, Ashis K. (1987). Nonparametric estimation of conditional quantile function. *Ph.D. dissertation*, University of California at Davis.

Bhattacharya, P.K. and Gangopadhyay, Ashis K. (1990). Kernel and nearest neighbor estimation of a conditional quantile. *Annals of Statistics*, **78**, 3, page 1400-1415.

Gangopadhyay, Ashis K. and Sen, Pranab K. (1990). Bootstrap confidence intervals for conditional quantile functions. *Sankhya*, **52**, Ser. A, Pt. 3, page 346-363.

Gangopadhyay, Ashis K. and Sen, Pranab K. (1991). Contiguity in nonparametric estimation of a conditional functional. *Nonparametric Statistics and Related Topics*. page 141-161, North-Holland, Amsterdam.

Pawitan, Yudianto and Gangopadhyay, Ashis K. (1991). Efficient bias corrected nonparametric spectral estimation. *Biometrika*, **78**, page 825-832.

Trager, G., Coughlin, D., Genin, A., Achituv, Y. and Gangopadhyay, A. (1992). Foraging to the rhythm of ocean waves: porcelain crabs and barnacles synchronize feeding motions with flow oscillations. *Journal of Experimental Marine Biology and Ecology*, **164**, page 73-86.

Gangopadhyay, Ashis K. and Sen, Pranab K. (1993). Contiguity in Badahur type representation of a conditional quantile and application in conditional quantile process. *Festschrift in honor of R.R. Bahadur*, page 219-232, Wiley Eastern.

Gangopadhyay, Ashis K. (1995). A note on the asymptotic behavior of conditional extremes. *Statistics and Probability Letters* , **25**, page 163-170.

Dey, D. and Gangopadhyay, A. K. (1996). Bayesian estimation of entropy with applications in model diagnostics. *Journal of Statistical Research*, **10**, No. 1, page 9-20.

Gangopadhyay, A. K., DiSario, R., Dey, D. (1997). A nonparametric approach to the k-sample inference based on entropy. *Journal of Nonparametric Statistics* ,**8**, page 237-252.

Gangopadhyay, A. K., Mallick, B. K. and Denison, D. G. T. (1999). Estimation of spectral density of a stationary time series via an asymptotic representation of the periodogram. *Journal of Statistical Planning and Inference*, **75**, page 281-290.

Gangopadhyay, A. K. and DiSario, R. (2001). Estimation of spectral components of a linear time series model. *Journal of Statistical Research*, **35**, page 79-80.

Denison, D. G. T., Mallick, B. K. and Gangopadhyay, A. K. (2002). A Bayesian Curve Fitting Approach to Power Spectrum Estimation. *Journal of Nonparametrics*, **14**, page 141-153.

Gangopadhyay, A. K., Cheung, K. (2002). A Bayesian approach to the kernel density estimation. *Journal of Nonparametric Statistics*, **14**, page 655-664.

Gangopadhyay, A. and Gau, G. (2003) Credibility Modeling via Spline Nonparametric Regression. *Casualty Actuarial Society Forum*, page 215-252.

Gangopadhyay, A. and Gau, G. (2004) Interval Estimation of Credibility Factor Using Markov Chain Monte Carlo. *Proceedings of the applied actuarial research conference 2003*.

Gangopadhyay, A. and Gau, G. (2007). Bayesian nonparametric approach to credibility modeling. *Annals of Actuarial Science*, **2**, page 91-114 .

Gau, G, Gangopadhyay, A., Hahn, J. (2007) Interval Estimation of Credibility Factor Using Markov Chain Monte Carlo. *Variance*, **2**, page 71-84.

Di, J. and Gangopadhyay, A. (2011) On the asymptotic efficiency of semiparametric GARCH models. *Econometrics Journal*, **14**, page 257-277.

Miao, X., Wang, Y-C. and Gangopadhyay, A. (2012) An entropy-based nonparametric test for the validation of surrogate endpoints. *Statistics in Medicine*. **31**, 1517-1530.

Di, J. and Gangopadhyay, A. (2013) One-step semiparametric estimation of the GARCH model. *Journal of Financial Econometrics*. Advance Access Published on April 14 2013, doi: 10.1093/jffinec/nbt013.

BOOK CHAPTER

Di, J. and Gangopadhyay, A. (2011) *Advances in Nonparametric and Semiparametric Methods*. Chapter 17, In F. Samaniego et. al., Nonparametric Statistical Methods and Related Topics, World Scientific.

PAPERS SUBMITTED FOR PUBLICATION

Di, J. and Gangopadhyay, A. (2013). A data-dependent approach to modeling volatility in financial time series. *Journal of Applied Econometrics*.

Unpublished Manuscripts

Miao, X., Gangopadhyay, A., Li, X., Chan, I. (2011) A nonparametric test for the identification of surrogate markers for time-to-event clinical endpoints

Yang, M., Zhang, Y. and McCulloch, C. and Gangopadhyay, A. (2010) A Bayesian approach to bias correction in effect estimation due to disease misclassification: application in arthritis research.

Gangopadhyay, A.K. and Cheung, K. (2004). Semiparametric estimation of the long-memory parameter in a FARIMA model.

CURRENT RESEARCH INTERESTS

Nonparametric time series prediction and smoothing, modeling financial time series, semiparametric volatility estimation, modeling high frequency financial data, applications in epidemiology and clinical trials.

Ph.D. STUDENTS

Charles Jones.

Dissertation title: Some problems in nonparametric estimation of density and measurement error regression model. (December 1994).

Robert DiSario.

Dissertation title: Nonparametric approaches to some problems for dependent and independent data. (June 1995).

Kin Chung

Dissertation Title: Semiparametric estimation of long-memory parameter of a fractional ARIMA. (January 2000)

Gary Gau

Statistical modeling in credibility theory. (April 2002)

Ya-Jung Chen

A conditional median approach to the estimation of functions in an additive model. (May, 2002)

Natercia Fortuna (Joint advisor)

Dissertation Title: Local and global rank tests with applications to demand systems. (April, 2002)

Mei-Fang Kao

Bayesian modeling of drop-out in longitudinal data. (May 2006)

Jianing Di

On the construction and estimation of GARCH models. (December 2007)

Mei Yang

A Bayesian approach to bias correction in effect estimation due to disease misclassification: application in arthritis research. (May 2010)

Xiaopeng Miao

Nonparametric tests for the validation of surrogate endpoint in clinical trials. (December 2011)

Nikolay Nikolaev

Some methods for robust inference in econometric factor models and in machine learning. (August 2013)

Current Student

Lin Wang.

Change-point problems in financial and multivariate data (working title).

GRANTS AND CONTRACTS

- **Boston University RULES grant (Co-PI)**
Project Period: May, 2011-June, 2013
Total Fund: \$50,000
- **Project Title: VA Diabetic Foot Care Study (PI)**
Funding Agency: Bedford VA Research Crop., Inc.
Project Period: 1/1/2006-12/31/2006
Total Fund: \$75,000
- **Project Title: Data Analysis for Children with Burn Injuries in Multicenter Outcome Study (PI)**
Funding Agency: Shriners Burns Hospital-Boston
Project Period: 1/1/2006-12/31/2006
Total Fund: \$42,457
- **Project Title: Research Studies for Mortality Risks for Insured Population (PI)**
Funding Agency: MIB Group, Inc.
Funding Period: May 1, 2006 to August 31, 2007.
Total Funding: \$65,016
- **Grant to develop a new innovative course in statistical modeling. BU summer school (2004).**
- **NSF research grant (PI), July 1992 to May 1995.**
- **Boston University faculty seed grant (1/1/90 to 12/31/90).**
- **Boston University summer support grant (July-August, 1990).**
- **Various travel grants to attend conferences and workshops.**

AWARDS

- **Nominated and one of the finalists for Boston University Metcalf Award for Excellence in Teaching (2006).**
- **Boston University College of Arts and Sciences Neu Family Excellence in Teaching award (2005).**
- **Awarded Boston University grant to develop an innovative course on statistical modeling for BU summer school (2004).**

Awards Received by Ph.D. students

- **Xiaopeng Miao won the 2010 Biostatistics best student paper competition for her entry "A nonparametric test for the validation of surrogate endpoints with applications to multiple sclerosis study"**
- **Mei Yang won the 2009 Biostatistics best student paper competition for her entry " A Bayesian approach to correcting bias in effect estimates due to disease misclassification: applications in arthritis research".**

SERVICES TO THE DEPARTMENT AND TO THE UNIVERSITY

- **Associate Chairman of the Department of Mathematics and Statistics, 2002 – present.**
- **Member of the CAS social science boot camp task force (2011- present)**
- **Member of the CAS task force on research faculty (2011 - present)**
- **Mentor for the Boston High School Scholars program (2010- present).**
- **Faculty advisor for CAS undeclared undergraduate students at the Taylor Advising Center (1998 – present).**
- **Invited member of the College of Arts and Sciences Premedical Advisory Board (1998-1999, 2007 - present).**
- **Organizer of the Ph.D. theory qualifying exam for Statistics and Biostatistics (1990-2009)**
- **Served in the departmental undergraduate, graduate and hiring committees (1990 – present).**

- **Departmental advisor of the Statistics undergraduate majors (1992- present).**
- **Director of Undergraduate Studies for Mathematics and Statistics (2002 – 2005).**
- **Director of the Statistics and Probability Program (1994 - 2001).**
- **Served as a faculty advisor at the CAS summer orientation for incoming freshmen (1999- present).**

TEACHING

1995-Present	Associate Professor Department of Mathematics Boston University
1989-1995	Assistant Professor Department of Mathematics Boston University
1987-1989	Visiting Assistant Professor Department of Statistics University of North Carolina at Chapel Hill
1983-1987	Graduate Teaching Assistant Department of Statistics University of California at Davis

COURSES TAUGHT AT BOSTON UNIVERSITY:

Elementary Statistics (MA 113)
 Applied Mathematics (MA 120)
 Introductory Statistics (MA 213)
 Applied Statistics (MA 214)
 Linear Algebra (MA 242)
 Modern Statistical Modeling and Data Analysis with Splus (MA421)
 Linear Models (MA 575)
 Stochastic Processes (MA 583)
 Design of Experiments (MA 586)
 Sampling Design (MA 587)
 Advanced Statistical Models I (MA 750)
 Estimation Theory (MA 781)
 Hypothesis Testing (MA 782)
 Time Series Analysis (MA 785 and MA585)
 Nonparametric Function Estimation (MA 799)
 Various Directed Study Courses on Specialized Topics

CONSULTING

- Consultant for the project investigating the risk for autistic disorder and prenatal exposure to the Quebec Ice Storm of 1998. McLean Hospital, Belmont.
- Statistical Consultant: Round Table Group (1998 – Current). Various educational, legal and biomedical projects.
- Consultant for the University Access Inc. Web based business statistics course development (October, 1999 – April, 2000).
- Statistical Consultant for various research projects at Boston University (1993 - Current).
- Statistical Consultant: California Air Resources Board (1986-87).
- Statistical Consultant: Statistical Laboratory at the University of California at Davis (1984 - 85).

CONFERENCE ORGANIZAR

Co-organizer of the New England Statistics Symposium (NESS) held at Boston University on April 21, 2012.

PROFESSIONAL MEETINGS

- (1) Institute of Mathematical Statistics annual meeting, San Francisco (August 1987).
- (2) American Mathematical Association annual meeting (Atlanta, January 1988).
- (3) Institute of Mathematical Statistics regional conference, Lexington (March, 1989).
- (4) NSF-CBMS conference on nonparametric function estimation, Davis (June, 1989).
- (5) Institute of Mathematical Statistics annual meeting, Washington, D.C. (August, 1989).
- (6) IMS annual meeting at Atlanta (August, 1991).
- (7) NSF-CBMS Conference on higher order asymptotics, Chapel Hill (August, 1991).
- (8) First International Triennial Symposium in Probability and Statistics. Calcutta (December, 1991).
- (9) American Statistical Association annual meeting at San Francisco (August, 1993).

- (10) NSF-CBMS Conference on Small Area Estimation, Storrs, CT (July, 1994).
- (11) Conference on the advancements in Time Series Analysis, Cambridge (October, 1995).
- (12) Annual meeting of the American Statistical Association at Chicago (August, 1996).
- (13) Invited speaker at the conference "Statistical Research in twenty-first Century", Montreal, November 29-30, 1996.
- (14) Invited speaker at the Seventh Eugene Lukacs Symposium, Bowling Green, Ohio, April 25-27, 1997.
- (15) Invited participant at the NSF and NBER conference on Time Series at Duke University, Durham, North Carolina, October 10-11, 1997.
- (16) Invited participant at the International Workshop on Wavelets and Statistics at Duke University, Durham, North Carolina, October 12-13, 1997.
- (17) Invited participant at the International Workshop on Financial Time Series at Cambridge University, England, October 10-17, 1998.
- (18) Invited speaker at the nonlinear estimation and classification conference at the MSRI, Berkeley, March 19-29, 2001.
- (19) Invited participant at the NSF and NBER conference on Time Series at North Carolina State University, Raleigh, North Carolina, September 21-22, 2001.
- (20) Invited speaker at the Center for Health Quality Outcome and Economic Research, Bedford, Massachusetts, Monday January 31, 2005.
- (21) invited participant at the NSF-NBER conference on Financial Time Series, Montreal, September 29-30, 2006.
- (22) Invited participant at the Conference on Global Climate Change. Math Sciences Research Institute, UC Berkeley, April 12-14, 2007.
- (23) Invited participant at the NSF-NBER conference on Financial Time Series, Iowa City, September 14-15, 2008.
- (24) Invited participant at the NSF-NBER conference on Financial Time Series, University of California at Davis, September 11-12, 2009.

SEMINARS

- (1)** Lecture at the annual meeting of the Institute of Mathematical Statistics at San Francisco (August, 1987).
- (2)** Seminar at the Department of Statistics, University of North Carolina at Chapel Hill (May, 1988).
- (3)** Invited speaker at the Department of Mathematics, University of North Carolina at Charlotte (January, 1989).
- (4)** Invited speaker at the Department of Mathematics, Boston University (February, 1989).
- (5)** Invited speaker at the Department of Mathematics, Tulane University (February, 1989).
- (6)** Invited speaker at the Department of Statistics, Southern Methodist University (February, 1989).
- (7)** Invited speaker at the Department of Mathematics, Tufts University (March, 1989).
- (8)** Contributed talk at the IMS regional conference at Lexington, Kentucky (March, 1989).
- (9)** Invited speaker at the Department of Statistics, University of Connecticut at Storrs (March, 1990).
- (10)** Contributed talk at the IMS annual conference, Atlanta (August 1991).
- (11)** Invited speaker at the Department of Statistics, University of Southern Louisiana, Lafayette (October, 1991).
- (12)** Invited speaker at the conference "First International Triennial Symposium on Probability and Statistics", Calcutta (Dec. 29, 1991 to January, 1992).
- (13)** Contributed talk at the American Statistical Association annual conference, Toronto, Canada (August, 1994).
- (14)** Invited speaker at the Mathematics Department, Imperial College, London (January, 1996).

(15) Presented a paper at the annual meeting of the American Statistical Association at Chicago (August, 1996).

(16) Invited speaker at the Mathematics Department, University of Maryland, Baltimore (April, 1998).

(17) Invited speaker at the Department of Statistics, Texas A&M University, College Station (March, 1999).

(18) Invited speaker at the NSF and NBER conference on Time Series at North Carolina State University, Raleigh, North Carolina, September 21-22, 2001.

(19) Invited Speaker at the Department of Statistics and Actuarial Science, University of Central Florida, November 1, 2002.

PROFESSIONAL SERVICES

Consulting editor of the Journal of Education for Business.

Co-organizer of *New England Statistics Symposium* (NESS) held at Boston University April 21, 2012.

Statistical consulting services for various private organizations, and for researchers at Boston University.

Referred research papers regularly for the following Journals:

Annals of Statistics.

Biometrika

Journal of American Statistical Association.

Journal of Multivariate Analysis.

Journal of Nonparametric Statistics.

Reliability (IEEE).

Statistics and Decisions.

Statistics in Medicine.

Journal of Statistical Planning and Inference

Scandinavian Journal of Statistics

The Annals of the Institute of Statistical Mathematics

Test

Reviewed grant proposals for the Statistics and Probability program at the National Science Foundation.

Chaired contributed paper sessions at various professional meetings.