

## Résumé

### Dr. Buddhananda Banerjee

Department of Mathematics, IIT Kharagpur



#### Positions:

- Visiting Assistant Professor (Dec'2016 onwards)  
Department of Mathematics, Indian Institute of Technology, Khatagpur<sup>1</sup>
- Assistant Professor [On contract] (Aug'2014-Dec'2016)  
Department of Mathematics and Statistics,  
Indian Institute of Science Education and Research, Kolkata
- Visiting Scientist (Oct'2013 -July'2014)  
SQC & OR Unit, Indian Statistical Institute, Kolkata
- Senior Research Fellow (Aug'2010-Oct'2013)  
Applied Statistics Unit, Indian Statistical Institute, Kolkata
- Junior Research Fellow (Aug'2008-Aug'2010)  
Applied Statistics Unit, Indian Statistical Institute, Kolkata
- Data Quality Analyst in Software Quality Assurance Group (Jul'2007 - Aug'2008)  
Cognizant Technology Solution, Kolkata

#### Education:

- PhD in Statistics (Aug'2008-Jan'2014)  
from Applied Statistics Unit of Indian Statistical Institute, Kolkata  
Thesis title : *Inference Based on Surrogate Endpoints in Clinical Trials with Binary Responses*  
Thesis advisor: Prof. Atanu Biswas
- Master in Statistics & Informatics [1<sup>st</sup> class] (2005-2007)  
from Indian Institute of Technology Kharagpur
- Bachelor in Statistics (2002-2005)  
from Narendrapur Ramakrishna Mission Residential College, University of Calcutta

---

<sup>1</sup>Address: Department of Mathematics, IIT Kharagpur, West Bengal, India- 721302,  
Email: buddhanandabanerjee@gmail.com, Phone: (91) 9051859051/ 9432877451

**Areas of Interest:**

- |   |   |
|---|---|
| 1. Surrogate endpoint analysis in clinical trials | 4. Spatio-temporal data analysis          |
| 2. Change point problem                           | 5. Categorical data and contingency table |
| 3. Goodness-of-fit test for survival data         | 6. Functional data analysis               |

**Publications:*****Published:***

1. Banerjee, B. and Mazumder, S., (2017) A more powerful test identifying the change in mean of functional data. *Annals of the Institute of Statistical Mathematics* [doi:10.1007/s10463-017-0606-0]
2. Banerjee, B. and Pradhan, B. (2016) Kolmogorov-Smirnov test for life test data with hybrid censoring. *Communications in Statistics - Theory and Methods*. [doi: 10.1080/03610926.2016.1205616]
3. Banerjee, B. and Biswas, A. (2016) True endpoint reduction by surrogate endpoint. *Communications in Statistics - Simulation and Computation*. [doi: 10.1080/03610918.2016.1171350]
4. Banerjee, B. and Biswas, A. (2015) Linear increment in efficiency with the inclusion of surrogate endpoint. *Statistics and Probability Letters*: **96** pp 102-108
5. Banerjee, B. and Biswas, A. (2014) Odds ratio for  $2 \times 2$  tables: Mantel-Haenszel estimator, profile likelihood in presence of surrogate responses. *Journal of Biopharmaceutical Statistics*: **24** pp 649-659
6. Banerjee, B., Biswas, A, and Mandal, S. (2013) Optimal sample proportion for a two-treatment clinical trial in presence of surrogate endpoints. *mODa 10-Advances in Model-Oriented Design and Analysis*: (D. Uciski and A.C. Atkinson, eds.) Springer pp 27-34
7. Banerjee, B. and Biswas, A. (2012) On the closeness of Mantel-Haenszel estimator and profile likelihood based estimator of common odds ratio from multiple  $2 \times 2$  tables. *Statistics and Probability Letters*: **82** pp 1990-1993
8. Banerjee, B. and Biswas, A. (2011) Estimating treatment difference for binary responses in the presence of surrogate end-points. *Statistics in Medicine*: **30** pp 186-196

**Communicated:**

9. B. Banerjee, Biswas, A., Ong, S.H., and Mandal, S., *Cochran-Mantel-Haenszel Test with Bivariate Binomial Model on Surrogate Marker Analysis*

**Work in progress:**

10. Banerjee, B. and Laha, A. K., *Estimating mean shift with a possible existence of single change-point in Gaussian sequence*
11. Banerjee, B. and Biswas, A., Ganguly K. S., *Use of distance function for ordinal categorical responses*
12. Banerjee, B and Rohit R. S., *On surrogate augmented adaptive design for two-treatment problem*
13. Ghosh, S. and Banerjee B., *A spatiotemporal approach to evolution of spatial homogeneity of monsoon extremes over India*
14. Biswas, A. and B. Banerjee *Surrogate augmented Fisher's exact test for  $2 \times 2$  contingency table*

**Teaching Experience:**

No	Subject	Course	Institute	Semester
1	Probability & Statistics	M.Sc (1st Year)	IIT Kharagpur	Running
2.	Regression & Time series	B.Tech (4th Year)	IIT Kharagpur	Running
3.	Probability & Statistics	B.Tech (2nd Year)	IIT Kharagpur	Spring, 2017
4.	Preparatory Mathematics II	B.Tech	IIT Kharagpur	Spring, 2017
5.	Mathematical Statistics	BS-MS (4th Year)	IISER Kolkata	Autumn, 2016
6.	Regression & Classification	BS-MS (5th Year)	IISER Kolkata	Spring, 2016
7.	Statistics Lab	BS-MS (4th Year)	IISER Kolkata	Spring, 2016
8.	Markov chain & Stochastic Process	BS-MS (5th Year)	IISER Kolkata	Autumn, 2015
9.	Numerical Analysis Lab	BS-MS (4th Year)	IISER Kolkata	Autumn, 2015
10.	Statistical inference	BS-MS (5th Year)	IISER Kolkata	Spring, 2015
11.	Probability and Statistics	BS-MS (2nd Year)	IISER Kolkata	Spring, 2015
12.	Numerical Analysis Lab	BS-MS (4th Year)	IISER Kolkata	Autumn, 2014
13	Survival analysis	M.Stat. (2nd year)	ISI, Kolkata	Spring, 2014

**Academic Visit:**

1. Visited Prof. Radhendushka Srivastava, Indian Institute of Technology, Bombay (June, 2017)
2. Visited Prof. S. H. Ong at ISM, University of Malaya, Kuala Lumpur, Malaysia (Sep.-Oct.,2011)
3. **Masters Summer project:** Worked with Prof. Arnab K Laha on “Estimation of Change points and current mean for linear and directional data” (May-June, 2006) at Indian Institute of Management, Ahmedabad.

**Served as referee for the following journals:**

1. Statistics & Probability Letters
2. Communications in Statistics - Theory and Methods
3. Communications in Statistics - Simulation and Computation
4. Journal of Statistical Computation and Simulation
5. Calcutta Statistical Association Bulletin
6. Journal of Indian Statistical Association

**Awards:**

**Qualified Indian Statistical Institute (ISI)JRF Entrance Test(2008) and awarded**

1. Junior Research Fellowship in Statistics from ISI,Kolkata (Aug' 2008 - Aug' 2010)
2. Senior Research Fellowship in Statistics from ISI,Kolkata (Aug' 2010 - Oct, 2013)

**Qualified National Eligibility Test(2008) and awarded**

3. Junior Research Fellowship in Mathematical Science from CSIR-NET (June,2008)
  4. Junior Research Fellowship in Mathematical Science from UGC-NET (Dec.,2008)
- (CSIR/UGC fellowships are not availed)

**Conference, Workshop & Seminar:**

***Invited Talk:***

1. Research Scholars Meet on Reliability Theory, Survival Analysis and Related Topics, Indian Statistical Institute, Kolkata, **India** (January 22-23, 2015)  
Topic: *Kolmogorov-Smirnov test for Hybrid Censored data.*
2. International conference organized by Institute of Applied Statistics of Sri Lanka, Colombo, **Sri Lanka** (28-30, December 2014)  
Topic: *Estimating mean shift with a possible existence of single change-point in Gaussian sequence*
3. Workshop on Data Analysis and Statistics with R, conducted by School of Mobile Computing, Jadavpur University, in Collaboration with Kolkata Chapter of Indian GNU/Linux Users Group ([www.ilug-cal.info](http://www.ilug-cal.info)) and Free Software Mancha, West Bengal. (December 9-10, 2011)  
**Title 1: Distribution Fitting with R ; Title 2: Data visualization with R**

***Presented Paper:***

1. Mathematics department seminar in Probability and Statistics at Indian Institute of Technology, Bombay, **India** (June 7, 2017)
2. 5th IIMA International Conference on Advanced Data Analysis, Business Analytics and Intelligence organized by Indian Institute of Management, Ahmedabad, **India** (April 8-9, 2017)
3. 9th International Conference on Multiple Comparison Procedures (MCP2015), Hyderabad **India** (Sep, 2-5, 2015)
4. 4th IIMA International Conference on Advanced Data Analysis, Business Analytics and Intelligence organized by Indian Institute of Management, Ahmedabad, **India** (April 11-12, 2015)
5. Mathematics department seminar in Probability and Statistics at Indian Institute of Technology, Bombay, **India** (April 10, 2015)
6. Research Scholars Meet on Reliability Theory, Survival Analysis and Related Topics, Indian Statistical Institute, Kolkata, **India** (February 19-21, 2014)
7. 3rd IIMA International Conference on Advanced Data Analysis, Business Analytics and Intelligence organized by Indian Institute of Management, Ahmedabad, **India** (April 13-14, 2013)
8. 8th International Triennial Calcutta Symposium on Probability & Statistics organized by Department of Statistics, University of Calcutta, Kolkata, **India** (December 27-30, 2012)
9. 33rd Annual Conference of the International Society for Clinical Biostatistics, Bergen, **Norway** (August 19 -23, 2012)
10. XI Biennial Conference of the International Biometric Society (Indian Region) on Computational Statistics and Bio-Sciences, Pondicherry, **India** (March 8-9, 2012)
11. National Conference on Application of Statistics in Industry and Planning, Dept. of Statistics, Visva- Bharati, Shantiniketan, **India** (February 25-27, 2012)
12. At seminar in ISM, University of Malaya, Kuala Lumpur, **Malaysia** (September 21, 2011)
13. 2nd IIMA International Conference on Advanced Data Analysis, Business Analytics and Intelligence organized by Indian Institute of Management, Ahmedabad, **India** (January 8-9, 2011)
14. 7th International Triennial Calcutta Symposium on Probability & Statistics organized by Department of Statistics, University of Calcutta, **India** (December 28-31, 2009)
15. 1st IIMA International Conference on Advanced Data Analysis, Business Analytics and Intelligence organized by Indian Institute of Management, Ahmedabad, **India** (June 6-7, 2009)

**Participated:**

1. Complex Systems in Time Series Conference, London , **U.K.** ( December 4-5, 2015)
2. International Workshop on Model-Oriented Data Analysis and Optimum Design-mODa 10, agw Lubuski, **Poland** (June 10-14, 2013)
3. Research Scholars Meet on Reliability Theory, Survival Analysis and Related Topics, Indian Statistical Institute, Kolkata, **India** (February 26-28, 2013).
4. Workshop on Reliability theory & Survival analysis, at Department of Mathematics & Statistics, Indian Institute of Technology, Kanpur, **India** (December 3-5, 2012)
5. Workshop on Reliability theory & Survival analysis, at Department of Mathematics, Indian Statistical Institute, Kolkata, **India** (December 6-9, 2011)
6. Summer School on Statistical Experimental Design held in Almagro, Ciudad Real, **Spain**( June 7-10th, 2011)
7. Workshop on Reliability theory & Survival analysis, at Department of Mathematics, Indian Institute of Technology, Bombay, **India** (November 25-27, 2010)
8. ISI-IMS-ISSAS Conference in Indian Statistical Institute, Kolkata, **India** (January 21-22, 2010)

**References:****Prof. Atanu Biswas**

Applied Statistics Unit  
 Indian Statistical Institute, Kolkata  
 203 B.T. Road, Kolkata-700108  
 West Bengal, India  
 Phone: +91-33-25752818  
 Email: atanu@isical.ac.in

**Prof. Arnab K Laha**

Area: Production and Quantitative Methods  
 Indian Institute of Management, Ahmedabad  
 Vastrapur, Ahmedabad - 380 015  
 Gujarat, India  
 Phone: +91-79-66324947  
 Email: arnab@iimahd.ernet.in

**Prof. Dr. Ong Seng Huat**

Institute of Mathematical Sciences  
 University of Malaya  
 Kuala Lumpur- 50603  
 Malaysia  
 Phone: +60-03-79674306  
 Email: ongsh@um.edu.my

**Prof. Saumen Mandal**

Department of Statistics  
 University of Manitoba  
 328 Machray Hall, Winnipeg,  
 MB R3T 2N2 Canada  
 Phone: +204-474-9661  
 Email: Saumen.Mandal@UManitoba.CA

