

Full name of the faculty member: Gaurangadeb Chattopadhyay

Designation: Professor



Address (Residential):

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Address (Office):

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Academic Qualifications:

(School : Sarisha Ramakrishna Mission, Diamond Harbour High School)

B.Sc.(Honours) in Statistics (1985): (From University of Calcutta)

(Name of the College: Ramakrishna Mission Residential College, Narendrapur)

M.Sc. in Statistics (1987): (From University of Calcutta)

Ph.D. in Statistics (1994): (From University of Calcutta)

(Title of the Thesis: *Detailed Statistical Inference and Related Problems*

Supervisor: Prof. S.K.Chatterjee, Former Professor, Department of Statistics, University of Calcutta)

Positions held/ holding:

Lecturer, Department of Statistics, St. Xavier's College, Calcutta (From July 1994- March 1995)

Lecturer, Department of Statistics, University of Calcutta (From April, 1995)

Senior Lecturer, Department of Statistics, University of Calcutta (From 1999)

Reader, Department of Statistics, University of Calcutta (From 2004)

Associate Professor, Department of Statistics, University of Calcutta (From 2007)

Head, Department of Statistics, University of Calcutta: 2007- 2009 (Two Years)

Head, Department of Statistics, University of Calcutta: October 1, 2022-

Professor, Department of Statistics, University of Calcutta (From 2012)

Convener, Ph.D. Research Advisory Committee in Statistics, University of Calcutta (From 2021)

Chairman, Undergraduate Board of Studies, University of Calcutta (From 2022)

Courses Taught:

Real Analysis, Complex Analysis, Metric Space, Measure Theory and Probability, Theory of Estimation, Theory of Hypothesis Testing, Nonparametric Inference, Large Sample Theory, Multivariate Analysis, Sequential Analysis, Advanced Parametric and Nonparametric Inference, Bayesian Inference, Sample Surveys.

Research interests:

Statistical Inference- Parametric and Nonparametric

Research guidance:

Number of researchers awarded Ph.D. degrees: 2

(Associate Supervisor: Prof. Tathagata Bandyopadhyay, Indian Institute of Management, Ahmedabad)

Number of researchers pursuing Ph.D.: 4

Published Papers: (Selected)

1. On the unconditional optimality of conditional tests (1990), **Calcutta Statistical Association Bulletin**, Vol-39,87-96. (with S.K.Chatterjee).
2. Detailed Statistical Inference-An alternative non-Bayesian approach: Two-Decision problem (1992), **Calcutta Statistical Association Bulletin**, Vol-42, 41-74. (with S.K.Chatterjee).
3. Detailed Statistical Inference-Multiple Decision Problem (1993), **Calcutta Statistical Association Bulletin**, Vol-43,155-180. (with S.K.Chatterjee).
4. On the non –existence of certain optimal confidence sets for the rectangular problem(1994),**Statistics and Probability Letters**,Vol-21, 263-269. (with S.K.Chatterjee)

5. Unconditional optimality of conditional tests in the presence of nuisance parameters(1997), **Calcutta Statistical Association Bulletin**, Vol-47,43-55.
6. Detailed Statistical Inference-from multiple decisions to confidence sets-A non-Bayesian approach(2000), **Calcutta Statistical Association Bulletin**, Vol-50,17-31.
7. On strong and weak confounding in a complex systems: Characterization and examples(2002),**American Journal of Mathematical and Management Sciences**, Vol 22, 303-320.(with M.Pal and Bikas K.Sinha).
8. Paired Sample Tests with Unordered Observations (2009), **Calcutta Statistical Association Bulletin**, Vol 61, 289-301 (Proceedings of the Sixth International Triennial Calcutta Symposium) (with K.Banerjee and T.Banerjee)
9. Inference on Polychotomous Responses in Finite Populations (2011), **Scandinavian Journal of Statistics**, Vol. 38: 788–800, (with S.Adhya and T.Banerjee)
10. Inference on Finite Population Categorical Response: Nonparametric Regression Based Predictive Approach (2012), **Advances in Statistical Analysis**, Vol-96, 69-98 (with S.Adhya and T.Banerjee)
11. A test for equality of marginals of FGM family of Bivariate distributions using unordered pairs (2012) - **Calcutta Statistical Association Bulletin**, Vol 64, 181-199 (with K.Banerjee and T.Banerjee)
12. “Simultaneous identification of growth law and estimation of its rate parameter for biological growth data: a new approach”- **Journal of Biological Physics**- (2014) Vol. 40(1):71-95 (With A.R. Bhowmick and S. Bhattacharya)
13. "Two-stage test of means of unordered pairs"-(2017) - **Statistics in Medicine** – 36(15), 2466-2480(with K.Banerjee and T.Banerjee).
14. “Coverage Probability and Exact Inference”- (2018) - **Journal of Statistical Theory and Practice** ,Vol-12, No.-1, 93–99 (with Bikas K.Sinha)
15. “Bias corrected estimators for proportion of true null hypotheses under exponential model: application of adaptive FDR-controlling in segmented failure data “-(2021)- **Journal of Applied Statistics**. (with Aniket Biswas and Aditya Chatterjee)
16. “Early detection of reliability related problems from two-dimensional warranty data considering labour code priority index”- (2022) – vol 225, 1-14, **Reliability Engineering and System Safety** (with Sanjib Kumar Gupta)
17. “New results for adaptive false discovery rate control with p-value weighting”- (2022)- **Statistical Papers**. (with Aniket Biswas) DOI: <https://doi.org/10.1007/s00362-022-01369-x>

Award:

1. *Certificate of Merit under National Scholarship Scheme (1980)*
2. *B.Sc.(Honours) in Statistics (1985)(University of Calcutta) : Stood First in First Class, Gold Medalist*
3. *M.Sc. in Statistics (1987)(University of Calcutta) : Stood First in First Class, Gold Medalist*
4. *Certificate of Merit for being among the top 5% candidates in CSIR-UGC Junior Research Fellowship Examination in Statistics (1987)*
5. *Certificate of Merit for being among the 5 top candidates in CSIR-UGC Junior Research Fellowship and Lectureship Examination in Statistics (1989)*
6. *Award of Research Associateship from Council of Scientific and Industrial Research (1994)*

Membership of Learned Societies:

- (a) Calcutta Statistical Association
- (b) Indian Science Congress Association
- (c) Indian Association for Productivity, Quality and Reliability

Office-Bearer of Learned Societies:

- (a) Joint Secretary of Calcutta Statistical Association (2003-2006)
- (b) Secretary of Calcutta Statistical Association (2007- 2010)

Editorship of Journals:

- (a) Managing Editor of Calcutta Statistical Association Bulletin (2000)
- (b) Editor of Seventh International Triennial Calcutta Symposium Proceedings Volume (2011) (with Prof. Dilip Roy)
- (c) Coordinating Editor of Calcutta Statistical Association Bulletin (2013-)
- (d) Editor of Platinum Jubilee Conference Proceedings volume (Springer Proceedings in Mathematics and Statistics), Kolkata, 2016 (2018) (with Prof. Asis Kumar Chattopadhyay)

Other Academic Activities: (Selected)

1. Convenor of the Organising Committee of the Seventh International Triennial Calcutta Symposium (2009)
2. Joint Convenor of the Organising Committees of the Fifth, Sixth, Eighth and Ninth International Triennial Calcutta Symposia (2003, 2006, 2012, 2015)
3. Coordinator of Refresher Course in Statistics, July 2- July 21, 2012 (with Dr. A.Sengupta).

4. Joint Convenor of the Platinum Jubilee International conference on “Applications of Statistics” held during December 21-23, 2016 in the Department of Statistics, University of Calcutta.
5. Local Coordinator of “Mathematics Training for Undergraduate Statistics Students” (MTUSS) (Supported by NBHM) for 2016 and 2018.
6. Convenor of the Workshop on “Machine Learning” for Post-Graduate Statistics Students and Young Researchers held during March 15-17, 2018 at the Department of Statistics, University of Calcutta (Under DSA Phase-II Programme).
7. Joint Convenor of the National Seminar on Sample Surveys in memory of late Prof. Samindranath Sengupta, former Professor, Department of Statistics, University of Calcutta, held on March, 29, 2019 organised by the Department of Statistics, University of Calcutta.
8. Convenor of an undergraduate faculty development workshop held on September 6, 2019 in the Department of Statistics, University of Calcutta.
9. Joint Convenor of the Workshop on “Data Science: decoding the black box” for the final year Post-Graduate Statistics Students of different Universities held during March 13-14, 2020 at the Department of Statistics, University of Calcutta
10. Part Time Lecturer: Department of Statistics, University of Kalyani (1994-1995).
11. Part Time Visiting Faculty for the Postgraduate Programme “Statistics for Management” of *Indian Institute of Management, Calcutta* during the Academic years 2015-16, 2016-17 and 2017-18.
12. Took classes in the modular course, offered by the Department of Statistics, Calcutta University for the Departments of Biological Sciences, University of Calcutta (Biotechnology, Microbiology, Genetics and Neuroscience) for more than fifteen years.
13. Took classes in the Departments of Home Science, Biochemistry, Anthropology, Political Science and Geography, University of Calcutta.
14. Paper-setter/ Examiner/ Moderator (in both undergraduate and Postgraduate levels) for different Colleges/ Universities of India.
15. Acted as a Referee for journals like Calcutta Statistical Association Bulletin, Journal of Royal Statistical Society, Statistics & Probability Letters, Statistical Methodology, Journal of Statistical Planning and Inference, Sankhya, Advances in Statistical Analysis, IAPQR

Transactions, Communications in Statistics – Theory and Methods, Journal of Statistical Theory and Practice, Statistical Methods and Applications.

16. Member of undergraduate and postgraduate Board of Studies of different colleges and universities.
(Presently: University of Calcutta, Presidency University, West Bengal State University, Ramakrishna Mission Residential College, Narendrapur, St. Xavier's College, Kolkata, St. Xavier's University, Sister Nivedita University, Ramakrishna Mission Vidyamandira)
17. Member of the Technical Advisory Committee of the Biological Sciences Division of the Indian Statistical Institute for the term 2020-2022.
18. Member of different committees associated with the Department of Higher Education, Government of India and Government of West Bengal.

Invited lectures delivered: (Selected)

1. Delivered a lecture in the “Winter School on Teaching of Statistics at Undergraduate Level” during 8-19 January, 2007 organised by Applied Statistics Unit (ASU), Indian Statistical Institute, Kolkata.
2. Delivered lectures as a resource person in the Refresher course entitled "Applications of Statistics in Social Sciences" from November 3-6, 2010 at the Department of Statistics, Manipur University.
3. Delivered a lecture at INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH (IISER), Kolkata on March 9, 2011.
4. Delivered a lecture in Haripal Gurudayal Institution, Hooghly, West Bengal on May 16, 2013 on the occasion of the *International Year of Statistics*.
5. Delivered a lecture on December 19, 2013 in the National Seminar on "Advances in Statistics: Techniques and Applications" organized by the Department of Statistics, Asutosh College, Kolkata in collaboration with Calcutta Statistical Association to commemorate the 150th Birth Anniversary of Sir Asutosh Mookerjee.
6. Delivered lectures as a resource person in the “Refresher Course in Mathematics” in the years 2014 & 2017 organised by the Academic Staff College, University of Calcutta in the Department of Pure Mathematics, University of Calcutta.
7. Delivered lectures in the “TRAINING PROGRAMME IN PROBABILITY THEORY AND ITS APPLICATIONS”(JANUARY 20-26, 2014) funded by Department of Science and Technology (DST), Govt. of India Organized by the DEPARTMENT OF STATISTICS, ARYA VIDYAPEETH COLLEGE, Guwahati, Assam.

8. Delivered lectures on February 27, 2014 in the three-day training programme on “Introduction to analysis of community ecology data by using R and CANOCO” organised by the Central Inland Fisheries Research Institute (Indian Council of Agricultural Research), Barrackpore.
9. Delivered lectures on October 17 and 21, 2014 in a Workshop on Advanced Methods in Field Biology and Statistical Applications in Life Science Research organised jointly by INDIAN ASSOCIATION FOR PRODUCTIVITY, QUALITY AND RELIABILITY and ZOOLOGICAL SOCIETY OF KOLKATA during October 16-21, 2014 at the Department of Zoology, University of Calcutta.
10. Delivered talks (video) in e-PG Pathshala (Statistics) in 2015 under Ministry of Human Resource Development.
11. Delivered a lecture on 21st January, 2015 in a One-Day Seminar on “Research Methodology & Statistical Techniques” organised by the Department of Home Science, University of Calcutta at Viharilal Campus.
12. Delivered lectures in AICTE SPONSORED FACULTY DEVELOPMENT PROGRAMME (FDP) On MANAGEMENT RESEARCH METHODOLOGY organised by the Centre for Management Studies (CMS), JIS College of Engineering, Kalyani on April 23, 2015.
13. Delivered lectures in TEQIP-II sponsored one week Faculty Development Program on ‘STATISTICAL MODELING & DATA ANALYSIS: ITS ENGINEERING APPLICATION’ on January 11, 2016 organized at Government College of Engineering and Textile Technology, Berhampore, West Bengal during January 11- January 15, 2016.
14. Delivered lectures on February 18, 2016 in the Workshop on “Statistical Techniques used in Research”, Department of Statistics, Burdwan University, February 16-19, 2016 and on February 21, 2017 in the Workshop on “Statistical Techniques used in Research”, Department of Statistics, Burdwan University, February 21-24, 2017.
15. Delivered a talk in the Refresher course in Behavioural Sciences in the Department of Anthropology, University of Calcutta on February 14, 2017.
16. Delivered lectures in the “Departmental Lecture Series Programme” of the Department of Statistics, Pondicherry University on March 9 and 10, 2017.
17. Delivered lecture on June 29, 2017 in the Seminar organized by Bureau of Applied Economics and Statistics, Department of Planning Statistics and Programme Monitoring, South 24 Parganas, Government of West Bengal, as a celebration of Statistics Day.

18. Delivered a talk in the Workshop on “Quantitative Methods for Public Health Researchers for the SAARC Countries” organised jointly by the International Statistical Institute and University of Calcutta held in the Department of Statistics, University of Calcutta during 28-30 December, 2017.
19. Delivered lectures in the “Prof. J.K.Ghosh Memorial Lecture Series” in the Department of Statistics, Presidency University on April 10 and 17, 2018.
20. Delivered lecture on June 29, 2018 in the Seminar organized by Bureau of Applied Economics and Statistics, Department of Planning Statistics and Programme Monitoring, South 24 Parganas, Government of West Bengal, as a celebration of Statistics Day.
21. Delivered a talk (video) for online refresher course in 2018 organised by the Department of Pure Mathematics, Applied Mathematics and Statistics, University of Calcutta under SWAYAM Platform under Ministry of Human Resource Development.
22. Delivered lectures in the "National Workshop on Statistical Data Analysis in Multidisciplinary Research -Learning through software" in Visva-Bharati University on August 28, 2018.
23. Delivered a lecture in a Seminar “Epsilon-Delta 2019” on March 20, 2019 organised by the Department of Statistics, St. Xavier’s College, Kolkata.
24. Delivered a lecture in a Seminar on “An Introduction to Mathematical Statistics” on March 30, 2019 organised by the Department of Statistics, Basanti Devi College, Kolkata.
25. Delivered a lecture in a Three-day Workshop on Statistical Applications in Astronomy and Astrophysics, (funded by Inter-University Centre for Astronomy and Astrophysics) from 20th to 22nd November, 2019 at the Department of Statistics, Assam University, Silchar.
26. Delivered a lecture in an interdisciplinary seminar (an IQAC initiative) on “*Group Theory*” and “*Basic Statistics with Computation through R*” organized by the Department of Mathematics and the Department of Statistics, Maulana Azad College, Kolkata, on February 12, 2020, sponsored by the Department of Higher Education, Government of West Bengal.
27. Delivered a lecture in a Two-day State level Workshop (UGC sponsored) on “Research Methodology” organized by the Department of Education, Rabindra Bharati University on 3rd & 4th of March, 2020.

28. Delivered two lectures in an online workshop on “Statistical Analysis using R and R-Studio” during June 29- July 3, 2020 organized by the Department of Management Studies, Bodoland University.
29. Delivered a lecture in a Webinar on “Statistics: Yesterday, Today and Tomorrow” organized by the Department of Statistics, Bethune College on July 29, 2020.
30. Delivered a lecture in one-week online workshop on “Statistical Inference” organized by the Department of Statistics, Dibrugarh University during August 24- 28, August 2020.
31. Delivered two lectures (online) in Ph.D. Course Work of the Department of Home Science, University of Calcutta on September 11 and 17, 2020.
32. Delivered a lecture (online) in the Lecture Series celebrating the Birth Centenary of eminent statistician Prof. C.R. Rao during 13th September, 2020 to 15th September, 2020 organised by the Department of Statistics, West Bengal State University.
33. Delivered a lecture (online) organized by the Department of Statistics, Amity University, Kolkata on October 28, 2020.
34. Delivered a lecture in a Seminar “Epsilon-Delta 2021” on April 13, 2021 organised by the Department of Statistics, St. Xavier’s College, Kolkata.
35. Delivered a lecture on June 29, 2021 organized by the Department of Statistics, Vivekananda college, Thakurpukur as a celebration of National Statistics Day.
36. Delivered a lecture in the International Workshop on Data Science held online during 18 - 20 September, 2021 hosted by DA-IICT Gandhinagar
37. Delivered four lectures in the online workshop on “Quantitative Techniques in Research” organized by National Institute of Technology, Durgapur on June 30, 2022 and July 1, 2022.
38. Delivered a lecture on August 13, 2022 in the “International Symposium on Probability and Statistics: New Frontiers”, organized jointly by the Department of Statistics, University of Calcutta and Calcutta Statistical Association, held between 12th to 14th August (Platinum Jubilee Celebration of Calcutta Statistical Association).