CURRICULUM VITAE

Name: **DR. Asis Kumar Chattopadhyay**

Date of Birth: 25th December, 1959

Position: **Professor, Department of Statistics, University of Calcutta**
           Visiting Scholar, Department of Mathematics and Statistics, University of Concordia, Montreal Canada, September 01- December 20, 2018.

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Qualifications:

        * PhD from the University of Calcutta in 1988 for the dissertation on 'Mobility Models and related Statistical Inference problems'.
        * M.Sc. (Statistics) examination of the University of Calcutta,1981, First Class (Examination held in 1982)
        * B.Sc.(Statistics Hons.) Examination of the University of Calcutta, 1979 from Presidency College, Kolkata, First Class.

Area of interest:

        Statistical Computing, Demography, Optimization Techniques, Astrostatistics.

COURSES TAKEN   :   Demography, Statistical Inference, Applied Multivariate Analysis, Optimization

Techniques, Computer Programming, Operations Research, Statistical Computing.

Employment & Teaching Experience:

Current Position:

∗ **Professor**, Department of Statistics, University of Calcutta

Previous Positions Held:

* **Associate Professor, Indian Statistical Institute (2007-2008, on lien)**
∗**Reader**, Department of Statistics, University of Calcutta
* **Senior Lecturer**, Department of Statistics, University of Calcutta
∗**Lecturer**, Department of Statistics, Calcutta University
∗**UGC Research Fellow**, Department of Statistics, Calcutta University

Other Administrative positions:

- Coordinator: M.Phil Course in Computer Applications of Statistics (2006-2010)
- Head : Department of Statistics , Calcutta University, (2001-2003, 2009-2011)
- Coordinator, IUCAA Resource and Data Centre, Kolkata (2009-)
- Coordinator: M.Phil Course in Statistics and Computer Applications (2012-2017)
- President, Operational Research Society of India, 2015-2016.
- Coordinator, DSA-Phase II, Department of Statistics , CU, 2015-2020
- Course Coordinator, Online Annual Orientation Course on Mathematics and Statistics, University of Calcutta (National Resource Centre)

Academic achievements:

Selected as Fellow of West Bengal Academy of Science and Technology (WAST) 2017

Selected as "Fellow of International Astrostatistics Association", 2016

Elected member of International Statistical Institute, 2016

Selected as Visiting Associate of "Inter University Centre for Astronomy and Astrophysics"(IUCAA) Pune for the period 2005-2008, 2008-2011, 2011-2014, 2014-2017,2017-2020.

Nominated as Statistical Expert in task force committee for Big Data Science on Astrophysics, Govt. of India.

Selected as Sponsored member (supported by UNFPA and French Ministry of foreign affairs) of IUSSP (International Union for the Scientific Study of Population) for the period 2005-2011.

Associate Editor: Journal of Applied Probability and Statistics

Project

(i)   **Awarded Indo-French (IFCAM) Project on "Statistical Modelling in Astronomy" during 2015-2017 (PI).**

(ii) Awarded a **Major Research Project** from DST on **"Study of galaxy formation through associated bulges, IGIMF and globular clusters." during 2014-16(Co-PI).**

(iii) Awarded a **Major Research Project** from DST on **"Dwarf galaxies, Ultra Compact dwarf galaxies and globular clusters" during 2010-13(Co-PI).**

(iv) Started IUCAA Resource Centre sponsored by Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune as Coordinator in the year 2009.

Ph.D. Supervision: Degree received: 5   Ongoing: 5

Number of published research papers in peer reviewed journals: 54

Number of books: 4

Collaborative Research Works :

Visited University of Southern Queensland, Australia during July - September ,2000 and jointly done some research work with Dr.Shahjahan Khan, Dept. of Mathematics an Computing, Southern Queensland University, Australia.

 As a Visiting Associate of Inter University Centre for Astronomy and Astrophysics, Pune, India interactions are going on with different faculty members.

   In the area of Astrostatistics, collaborations are going on with Dr. Didier Fraix Burnet, and visited his Institute   Institut de Planétologie et d'Astrophysique de Grenoble, France as Visiting Professor during June 15-July 15, 2012.

Under Indo-French (IFCAM) project visited Observatoire de Paris, Paris, France during June 24-July 10, 2016 for collaboration with Dr. Frédéric Arenou and Professor Christian Robert.

LIST OF IMPORTANT PUBLICATION (2017-2006)

1. Unsupervised classification of eclipsing binary light curves through k-medoids clustering, Soumita Modak, Tanuka Chattopadhyay and **Asis Kumar Chattopadhyay,** arXiv:1801.09406 [astro-ph.SR], 2018

2. Clustering of Gamma-Ray bursts through Kernel Principal Component Analysis, Soumita Modak, **Asis Kumar Chattopadhyay** and Tanuka Chattopadhyay, **Communications in Statistics- Simulation and Computation, 2018, 47(4) 1088-1102.**. https://doi.org/10.1080/03610918.2017.1307393

3. Two phase formation of massive elliptical galaxies: study through cross correlation including spatial effect, Soumita Modak, Tanuka Chattopadhyay **and Asis Kumar Chattopadhyay Astrophysics and Space Science, 2017,** 362(11) article id.206.

4. Incomplete Data in Astrostatistics, **Asis Kumar Chattopadhyay, Wiley StatsRef: Statistics Reference online, 2017.**

5. Evolution of Initial Mass function in Young Massive Star Clusters, Abisa Sinha, Tanuka Chattopadhyay and **Asis Kumar Chattopadhyay, Rashi,2017,** 2(1), 18-25.

6. Classification under non-Gaussian set up: An Astrostatistical problem, Tuli De, Rahul Bhattacharya and **Asis Kumar Chattopadhyay**, **Journal of Applied Probability and Statistics, 2016,** 11(2), 29-47.

7. Study on temporal effects on Urban Malaria incidences, Krishnendra S. Ganguly, Soumita Modak, Krishna S. Ganguly and **Asis Kumar Chattopadhyay**, **International Journal of Statistics in Medical Research, 2016**, 5, 120-132.

8. Analysis of partial ordinal longitudinal data, Kalyan Das, Surupa Roy aand **Asis Kumar Chattopadhyay, Journal of Statistical Research, 2016,**48-50(1),15-33**.**

9. Clustering large number of extragalactic spectra of galaxies and quasars through canopies Tuli De, Didier Fraix Burnet and **Asis Kumar Chattopadhyay, Communications in Statistics, theory and methods**, **2016**, 45(9), 2638-2653.

10. Influence of binary fraction on the fragmentation of young massive clusters?a Monte Carlo simulation, Tanuka Chattopadhyay, Abisa Sinha, **Asis Kumar Chattopadhyay**, **Astrophysics and Space Science, 2016,** 361,120-133.

11. AstroStat- A VO tool for statistical analysis, A.K. Kembhavi, A.A. Mahabal, T. Kale, S. Jagade, A. Vibhute, P. Garg, K. Vaghmare, S. Navelkar, T. Agrawal, **A. Chattopadhyay**, D Nandrekar, M. Shaikh, , **Astronomy and Computing, 2015,** 11(B), 126-137.

12. Multivariate Approaches to Classification in Extragalactic Astronomy, Didier Fraix-Burnet, Marc Thuillard and **Asis Kumar. Chattopadhyay**, **Frontiers in Astronomy and Space Science,2015,2**.

13. Study of the nature of dark matter in halos of dwarf galaxies, Pradip Karmakar, Tanuka Chattopadhyay and **Asis Kumar Chattopadhyay, Astrophysics Space Science,2015,**358,46**.**

14. Cosmic history of the integrated galactic stellar Initial Mass Function: A Simulation Study, Tanuka Chattopadhyay, Tuli De, Bharat Warlu and **Asis Kumar Chattopadhyay, Astrophysical Journal**, **2015**, 808, 24-38.

15. Independent Component Analysis and Clustering for Pollution Data, **Asis Kumar Chattopadhyay**, Saptarshi Mondal and Atanu Biswas, **Environmental and Ecological Statistics, 2015, 22(1), 33-43.**

16. Use of cross correlation function to study formation mechanism of massive elliptical galaxies, Tuli De, Tanuka Chattopadhyay and **Asis Kumar Chattopadhyay, Publications of the Astronomical Society of Australia, 2014, 31, 47-54**.

17. Outlier detection through Independent Components for non Gaussian data, **Asis Kumar Chattopadhyay** and Saptarshi Mondal, **Journal of the Indian Society of Agricultural Statistics, 2014, 68(2), 39-54.**

18. Performance Comparison of Clustering Techniques on the basis of galaxy data, Tuli De, Tanuka Chattopadhyay and **Asis Kumar Chattopadhyay**, **Calcutta Statistical Association Bulletin,2013,65(257-258).**

19. Probability distributions of number of children and maternal age at various order births using age-specific fertility rates by birth order, Samba Siva Rao Pasupuleti and **Asis Kumar Chattopadhyay**, **Sankhy series B,2013** 75(2), 374-408

20. Independent Component Analysis for the objective classification of globular clusters of the galaxy NGC 5128 **Asis Kumar Chattopadhyay**, Saptarshi Mondal and Tanuka Chattopadhya **Computational Statistics and Data Analysis**, **2013**, 57,17-32.

21. A six-parameter space to describe galaxy diversification
  D. Fraix-Burnet, T. Chattopadhyay, **Asis. Kr. Chattopadhyay**, E. Davoust, and M. Thuillard
  Astronomy and Astrophysics, **2012**,545, A80.

22. Uncovering the formation of ultracompact dwarf galaxies by multivariate statistical analysis.Tanuka Chattopadhyay, Margarita Sharina, Emmanuel Davoust, Tuli De and **Asis Kumar Chattopadhyay Astrophysical Journal**, **2012**, 750, 91

23. Independent Component Analysis for dimension reduction classification : Hough Transform and CASH algorithm.**Asis Kr Chattopadhyay**, Tanuka Chattopadhyay, Tuli De and Saptarshi Mondal.**Astrostatistical Challenges for New Astronomy, Springer Series in Astrostatistics**, **2012**, Editor Joseph Hilbe.

24. Exploring New Models for Population Prediction in detecting Demographic Phase Change for Sparse Census Data, Arindam Gupta ,Sabyasachi Bhattacharya and **Asis Kr Chattopadhyay**, **Communications in Statistics, Theory and Methods**. **2012**, 41, 1171.

25. Modeling of the Initial Mass Function using the Metropolis Hastings Algorithm
  Tanuka Chattopadhyay, **Asis Kr Chattopadhyay** and Abisa Sinha , **Astrophysical Journal 2011**, 736, 152

26. **Structures in the fundamental plane of early-type galaxies.**
  Didier Fraix-Burnet, M.Dogue, T Chattopadhyay, **A.K.Chattopadhyay** and Emmanuel Davoust.
  Monthly. Notices. Royal Astro. Soc., **2010**,407,2207.

27. **Study of NGC5128 globular clusters under multivariate statistical paradigm.**
  Asis Kumar Chattopadhyay, Tanuka Chattopadhyay, Saptarshi Mondal, Margarita Sharina and Emmanuel Davoust.
  Astrophysical Journal, 2009, 705, 1533.

28. **Horizontal Branch Morphology of Globular Clusters: A Multivariate Statistical Analysis**
  Jogesh Babu, Tanuka Chattopadhyay, **A.K.Chattopadhyay** and Saptarshi Mondal
  Astrophysical Journal, **2009**, 700, 1768.

29. **Effect of Migration on Population growth under dynamical system**
  Sabyasachi Bhattacharya, Arindam Gupta and **Asis Kumar Chattopadhyay**
  Journal of Applied Probability and Statistics, 2009,4(2), 239.

30. **Classification and Clustering techniques with application in Astrophysics**
  Asis Kumar Chattopadhyay ,Multivariate Statistical Methods, Theory and Applications
  (edited by A. Sengupta),2008, 202-215, Macmillan India Ltd

31. **Globular Clusters in the Milky Way and Dwarf Galaxies - A Distribution-Free Statistical Comparison,**Saptarshi Mondal, **Asis Kumar Chattopadhyay** and Tanuka Chattopadhyaym, **Astrophysical Journal, 2008**, 683, 172

32. **Statistical evidences of three classes of Gamma Ray Bursts**
Tanuka Chattopadhyay, Ranjeev Misra, **Asis Kumar Chattopadhyay** and Malay Naskar
Astrophysical Journal, 2007, 667, 1017.

33. **A Stochastic Manpower Planning model under varying class sizes**
Asis Kumar Chattopadhyay and Arindam Gupta
Annals of Operations Research, 2007,155(1), pp 41

34. **Globular Clusters of LOCAL Group – Statistical Analysis**
Tanuka Chattopadhyay and **Asis Kumar Chattopadhyay**
Astronomy and Astrophysics, **2007,** 472, 131.

35. **Objective Classification of Spiral Galaxies having Extended Rotation Curves beyond Optical Radius.**
Tanuka Chattopadhyay and **Asis Kumar Chattopadhyay**
Astronomical Journal, **2006,** 131, 2452.

36. **Study on Diffusion of Rumours through Epidemic Models under non identical set up**
Asis Kumar Chattopadhyay and Arindam Gupta **Cal. Stat. Assoc.Bull. 2006**, 58(231-232),263

BOOKS:

1. **Computer Applications of Mathematics and Statistics**
Asis Kumar Chattopadhyay and Tanuka Chattopadhyay: Asian Books Pvt Ltd. 2005

2. **Demography: Techniques and Analysis**
Asis Kumar Chattopadhyay and Anuj Saha, Viva Books Private Limited, 2012

3. **Statistical Methods for Astronomical Data Analysis**
Asis Kumar Chattopadhyay and Tanuka Chattopadhyay, Springer Series in Astrostatistics, New York, 2014 (Selected under the category of "Outstanding publication in Astrostatistics-2016" by International Astrostatistics Association)

4. Statistics and its Applications, Proceedings Volume of Platinum Jubilee conference, Deparment of Statistics, Calcutta University, Springer, 2018-08-28, Editors: Asis Kumar Chattopadhyay and Gaurangadeb Chattopadhyay.