Sanjay Chaudhuri

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Education

- **Doctorate :** Ph.D from **University Of Washington, Seattle** : 2005.

- **Master of Statistics :** M.Stat from the **Indian Statistical Institute, Calcutta** : 2000. Specialisation : Mathematical Statistics and Probability.

- **Bachelor of Statistics :** B.Stat with Honours from the **Indian Statistical Institute, Calcutta** : 1998.

Academic Appointments

- Associate Professor at the Department of Statistics, University of Nebraska-Lincoln, March 2023 - present.

- Associate Professor at the Department of Statistics and Applied Probability, National University of Singapore, January 2012 - February 2024.

- Assistant Professor at the Department of Statistics and Applied Probability, National University of Singapore, August 2005 - December 2011.

Research Interests

- Development and analysis of methodologies in statistics, machine learning and data science;

- Theory and application of empirical likelihood; Analysis of complex survey data; Statistical data integration; Application of statistics in demography; Statistics on network data; Bayesian empirical likelihood;

- Graphical Markov models; Covariance estimation for high-dimensional data; Graphical model selection; Causality; Artificial intelligence;

- Computation intensive statistical methods; Approximate Bayesian computation; Markov chain Monte Carlo techniques; Optimisation problems;

- Order restricted inference; Multivariate statistics and decision theory;

- Survival analysis; Competing risk models;

- Small area estimation; Mixed effects models; Variance component estimation, Benchmarking techniques;

- Application of statistics to real life problems; Statistical analysis of data obtained from experiments in natural, engineering and marketing sciences;

- Developing user-friendly statistical softwares.

Publications[1]

Journal Publications :

1. Kien Dang Trung*, Wai Neo Han*, and Chaudhuri Sanjay. ((accepted)) elhmc: An R Package for Hamiltonian Monte Carlo Sampling in Bayesian Empirical Likelihood. *R journal,* URL: https://arxiv.org/abs/2209.01289.

2. Chaudhuri Sanjay, Ghosh Subhroshekhar, and Pham Kim Cuc. (2024) On an Empirical Likelihood Based Solution to the Approximate Bayesian Computation Problem. *Statistical Analysis and Data Mining: An ASA Data Science Journal,* Vol **17**(5):e11711.

3. Tissopi Rengka, Rupero Vibeizonuo, Chaudhuri Sanjay, and Bhattacharyya Jhimli. (2024) On surface binding of serum albumin by harmane: An in vitro spectroscopic and theoretical analysis. *Journal of Molecular Liquids,* Vol **409**:125311.

4. Ghosh Subhroshekhar, Chaudhuri Sanjay, and Gangopadhyay Ujan. (2023) Maximum Likelihood Estimation Under Constraints: Singularities and Random Critical Points. *IEEE Transactions on Information Theory,* Vol **69**(12):7976–97.

5. Bhattacharjee Satarupa, Liao Shuting, Paul Debashis, and Chaudhuri Sanjay. (2022) Inference on the dynamics of COVID-19 in the United States. *Scientific Reports,* Vol **12**(1):2253.

6. Bhattacharjee Satarupa, Liao Shuting, Paul Debashis, and Chaudhuri Sanjay. (2022) Taming the pandemic by doing the mundane. Ghosh Aurobindo, Haldar Amit, and Bhaumik Kalyan (Eds.), *Managing Complexity and Covid-19: Life, Liberty or the Pursuit of Happiness.* Routledge. 62–82.

7. Chaudhuri Sanjay, Kubokawa Tatsuya, and Sugasawa Shonosuke. (2022) Covariance based Moment Equations for Improved Variance Component Estimation. *Statistics,* Vol **56**(6):1290–318.

8. Kubokawa Tatsuya, Sugasawa Shonosuke, Tamae Hiromasa, and Chaudhuri Sanjay. (2021) General Unbiased Estimating Equations for Variance Components in Linear Mixed Models. *Japanese Journal of Statistics and Data Science,* Vol **4**:841–59.

9. Chaudhuri Sanjay and Handcock Mark S. (2018) A Conditional Empirical Likelihood Based Method for Model Parameter Estimation from Complex Survey Datasets. *Statistics and Application, The special J. N. K. Rao felicitation issue, The Society of Statistics, Computer and Application,* Vol **16**(1):245–68.

10. Ong Meng Hwee Victor*, Chaudhuri Sanjay, and Turlach Berwin. (2018) Edge selection for undirected graphs. *Journal of Statistical Computation and Simulation,* Vol **88**(17):3291–322.

11. Chaudhuri Sanjay, Mondal Debashis, and Yin Teng*. (2017) Hamiltonian Monte Carlo sampling in Bayesian empirical likelihood computation. *Journal of the Royal Statistical Society: Series B (Statistical Methodology),* Vol **79**(1):293–320.

12. Kubokawa Tatsuya, Sugasawa Shonosuke, Ghosh Malay, and Chaudhuri Sanjay. (2016) Prediction in heteroscedastic nested error regression models with random dispersions. *Statistica Sinica,* Vol **26**:465–92.

13. Bandyopadhyay Antar and Chaudhuri Sanjay. (2014) Variance estimation for tree order restricted models. *Statistics,* Vol **48**(5):1122–37.

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[1]* indicates a Phd., MSc or an undergraduate final year project student.

14. Chaudhuri Sanjay. (2014) Qualitative inequalities for squared partial correlations of a Gaussian random vector. *Annals of Institute of Statistical Mathematics,* Vol **48**(2):345–67.

15. Pham Kim Cuc*, Nott David J., and Chaudhuri Sanjay. (2014) A note on approximating ABC-MCMC using flexible classifiers. *Stat,* Vol **3**(1):218–27.

16. Perlman Michael D. and Chaudhuri Sanjay. (2012) Reversing the Stein Effect. *Statistical Science,* Vol **27**(1):135–43.

17. Chaudhuri Sanjay and Ghosh Malay. (2011) Empirical likelihood for small area estimation. *Biometrika,* Vol **98**(2):473–80.

18. Chaudhuri Sanjay and Tan Gui Liu*. (2010) On qualitative comparison of partial regression coefficients for Gaussian graphical Markov models. Vianna Marlos A. G. and Wynn Henry P. (Eds.), *Algebraic Methods in Statistics and Probability II.* Contemporary Mathematics. American Mathematical Society. 125–33.

19. Chaudhuri Sanjay, Handcock Mark S., and Rendall Michael S. (2008) Generalized linear models incorporating population level information: an empirical-likelihood-based approach. *Journal of the Royal Statistical Society: Series B (Statistical Methodology),* Vol **70**(2):311–28.

20. Chaudhuri Sanjay, Drton Mathias, and Richardson Thomas S. (2007) Estimation of a covariance matrix with zeros. *Biometrika,* Vol **94**(1):199–216.

21. Chaudhuri Sanjay, Handcock Mark S., and Rendall Michael S. (2007) A 2-step empirical likelihood based approach for combining sample and population data in regression estimation. *Proceedings of the ISI 2007.*

22. Chaudhuri Sanjay and Perlman Michael D. (2007) Consistent estimation of the minimum normal mean under the tree-order restriction. *J. Statist. Plann. Inference,* Vol **137**(11):3317–35.

23. Kar Abhijit, Chaudhuri Sanjay, Sen Pratik K., and Ray Ajoy Kumar. (2007) Evaluation of hardness of the interfacial reaction products at the alumina-stainless steel brazed interface by modeling of nanoindentation results. *Scripta Materialia,* Vol **57**(9):881–4.

24. Chaudhuri Sanjay and Perlman Michael D. (2006) Two step-down tests for equality of covariance matrices. *Linear Algebra Appl.,* Vol **417**(1):42–63.

25. Chaudhuri Sanjay and Perlman Michael D. (2005) Biases of the maximum likelihood and Cohen-Sackrowitz estimators for the tree-order model. *Statist. Probab. Lett.,* Vol **71**(3):267–76.

26. Chaudhuri Sanjay and Perlman Michael D. (2005) On the Bias and Mean-Squared Error of Order-restricted Maximum Likelihood Estimators. *J. Statist. Plann. Inference,* Vol **130**(1-2):229–50.

27. Perlman Michael D. and Chaudhuri Sanjay. (2004) The role of reversals in order-restricted inference. *Canad. J. Statist.,* Vol **32**(2):193–8.

28. Chaudhuri Sanjay and Richardson Thomas. (2003) Using the structure of d-connecting paths as a qualitative measure of strength of dependence. 19*th conference of Uncertainty in Artificial Intelligence.* 116–23.

29. Kumar Krishna, Chaudhuri Sanjay, and Das Alaka. (2002) Quasiperiodic waves at the onset of zero-Prandtl-number convection with rotation. *Phys. Rev. E,* Vol **65**(2):026311.

Technical Reports and Other Publications :

1. Chaudhuri Sanjay, Handcock Mark S., and Rendall Michael S. A Conditional Empirical Likelihood Approach to Combine Sampling Design and Population Level Information. Tech. rep. 03_2010. Department of Statistics and Applied Probability. (2010).

2. Chaudhuri Sanjay and Drton Mathias. On the Bias and Mean-squared Error of the Sample Minimum and the Maximum Likelihood Estimator for two Ordered Normal Means. Tech. rep. 432. Department of Statistics, University of Washington. (2003).

PhD. Thesis :

1. Chaudhuri Sanjay. *Using the structure of d-connecting paths as a qualitative measure of the strength of dependence.* PhD thesis. University of Washington. (2005).

Under Revision [2] **:**

1. Chaudhuri Sanjay, Kien Dang Trung*, Kumar Gopinatha Suresh, Maiti Souvik, Miyoshi Daisuke, and Bhattacharyya Jhimli. A Unified Statistical Procedure to Analyse Irreversible Thermal Curves. arXiv: 2209.03957URL: https://arxiv.org/abs/2209.03957.

Selected Preprints :

1. Chaudhuri Sanjay, Handcock Mark S., and Rendall Michael S. Population level information combined parameter estimation from complex survey datasets. arXiv: 2209.01247URL: https://arxiv.org/abs/2209.01247.

2. Chaudhuri Sanjay and Teng Yin*. A Two-step Metropolis Hastings Method for Bayesian Empirical Likelihood Computation with Application to Bayesian Model Selection. arXiv: 2209.01269URL: https://arxiv.org/abs/2209.01269.

3. Sema Akito I., Chaudhuri Sanjay, and Bhattacharyya Jhimli. A brief investigation of the iron content in the ground waters of Dimapur district in Nagaland, India. URL: https://doi.org/10.26434/chemrxiv-2025-bsqdv.

Software Development

1. `glmc`: A package for combining sample and population information using *empirical likelihood.* The library is available at https://cran.r-project.org/web/packages/glmc/index.html.

2. `ES`: Implementation of the *Edge Selection Algorithm.* Package mostly mostly by Victor Meng Hwee Ong with inputs from me and Berwin Turlach.
    The library is available at https://cran.r-project.org/web/packages/ES/index.html.

3. `elhmc`: Sampling from a empirical likelihood Bayesian posterior of parameters using Hamiltonian Monte Carlo. Package mostly coded by Dang Trung Kien from an initial code written by Neo Han Wai.
    The library is available at https://cran.r-project.org/web/packages/elhmc/index.html

4. `Anhysnuc`: Analysis of Hysteric (Irreversible) Thermal Curves from Nucleic Acid Hybridisation Experiments. This is a web-based R package to analyse irreversible thermal curves frequently obtained from hybridisation experiments involving nucleic acids. The package in its current form is mostly written by me and Dang Trung Kien. The library is available at https://sanjaychaudhuri.shinyapps.io/anhysnuc/.

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[2]* indicates a Phd., MSc or an undergraduate final year project student

5. `abcel`: Empirical likelihood-based approximate Bayesian Computation. Package mostly coded by Nicholas Chua, and Riddhimoy Ghosh from an initial code written by me.
The library is available at https://CRAN.R-project.org/package=abcel

Honours and Awards

- *Elected member of the International Statistical Institute*: 2022.

- *International Indian Statistical Association Young Statistical Scientist Award*: 2018, for contribution to Theoretical Statistics and Probability.

- *International Centre Visiting Professor, T. U. Munich*: 10*th* to 30*th* July 2017.

- The *Laha Award* from the Institute of Mathematical Statistics : 2004.

- The *Travel award* from the Center for Statistics and the Social Sciences, University of Washington : 2004.

- *National Merit Scholar of India* : 1993, 1995.

Research Funding

1. *ABCel: An Empirical Likelihood-based Method for Approximate Bayesian Computation*: 09/2024 to 08/2027, USD $160,000$. Granting agency: National Science Foundation, Division of Mathematical Sciences, USA.

2. *High Dimensional Constrained Covariance Estimation using U-Statistics and Empirical Likelihood*: 07/2019 to 06/2022, SGD $230,000$. Granting agency: Ministry of Education, Singapore.

3. *Industry Relevant PHD Scholarship, industry partner: Proctor and Gamble, Singapore*: Provides support for a graduate student for four years. Granting agency: National University of Singapore.

4. *On Useful Properties of the Gradient of Log-empirical Likelihood*: 01/2018 to 12/2020, SGD $31,000$. Granting agency: Ministry of Education, Singapore.

5. *Empirical Likelihood based Methods for Complex Survey Data*: 09/2016 to 08/2019, SGD $31,769$. Granting agency: Ministry of Education, Singapore.

6. *Bayesian Model Selection with Empirical Likelihood*: 09/2013 to 02/2017, SGD $74,000$. Granting agency: Ministry of Education, Singapore.

7. *Model Selection for Graphical Markov Models*: 09/2012 to 08/2015, SGD $78,000$. Granting agency: Ministry of Education, Singapore.

8. *Bayesian Empirical Likelihood*: 04/2011 to 03/2014, SGD $42,918$. Granting agency: Ministry of Education, Singapore.

9. *Information Inequalities for Random Vectors with Applications to Graphical Markov Models*: 09/2008 to 02/2012, SGD $41,500$. Granting agency: Ministry of Education, Singapore.

10. *Empirical Likelihood Based Procedures for Estimating Parameters of Interest in Graphical Markov Models*: 10/2005 to 10/2008, SGD $40,421$. Granting agency: Ministry of Education, Singapore.

<div align="center">**<u>Post-Doctoral Fellows and Student</u>**</div>

Post-Doctoral Fellow.

- Charles Xi Yan, 2020 - 2022.

PhD.

- Victor Meng Hwee Ong

  Thesis title *Model Selection For Graphical Markov Models*
  Graduated 2014.
- Yin Teng

  Thesis title *On Computational Techniques for Bayesian Empirical Likelihood and Empirical Likelihood Based Bayesian Model Selection*
  Graduated 2015
- Thi Kim Cuc Pham (*Jointly supervised with David Nott.*)

  Thesis title *Empirical Likelihood, Classification and Approximate Bayesian Computation*
  Graduated 2016
- Osei Prince Peprah (*Jointly supervised with Ajay Jasra.*)

  Thesis title *Multilevel Particle Filters for Continuous Time Processes*
  Graduated 2018

Research Fellow.

- Rupsa Roy, 2021 - 2022.

MSc.

- Yan Liyuan, Graduated 2012.
- Md. Hasibur Rahman, Graduated 2025.
- Riddhimoy Ghosh, 2024 - .
- Gaurav Daga, 2025 - .

Undergraduate Final Year project (selected).

- Jian Hao Tan, Gui liu Tan, Wang Xu, Victor Meng Hwee Ong, Dang Trung Kien, Neo Han Wei, Hong Jie, Cai Sijia, Wang Jiamin, Zhu Yiqing, Dai Mingxi, Png Hang.

<div align="center">**<u>Short Courses</u>**</div>

- The Empirical Likelihood and Its Application to Complex Survey Problems, SAE 2023-24 Conference, Pontificia Iniversidad Católica del Peru, June, 2024.

Modules Taught

- *Undergraduate*:

  - Introduction to Data Science,
  - Design and Analysis of Experiments,
  - Survey Methodology,
  - Probability,
  - Linear Models,
  - Demographic Methods,
  - Freshman Seminars,
  - Simulation.

- *Graduate*:

  - Experimental Designs,
  - Applied Regression Analysis,
  - Applied Bayesian Analysis,
  - Graphical Markov models,
  - Sampling from a Finite Population,
  - Analysis of Time Series Data,
  - Advanced Topics in Applied Statistics,
  - Statistical Models:Theory/Application.
  - Mathematical Statistics I-Distribution Theory
  - Advanced Probability Theory I

Editorial Service

- **Associate Editor :**

  1. Statistics and Computing, 2022 - present.
  2. Statistics in Transition New Series, 2019 - present.
  3. Sankhya, Series B, 2016 - present.
  4. Statistics and Applications, 2016 - present.
  5. STAT, 2012 - present.
  6. Journal of Nonparametric Statistics, 2011 - present.
  7. Journal of Statistical Planning and Inference, 2016 - 2024.
  8. Journal of the American Statistical Association, Theory and Methods, 2020 - 2023.
  9. Electronic Journal of Statistics, July 2015 - December 2015.

- **Guest Co-Editor :**

  1. Special Issue on Statistical Data Integration, Statistics in Transition New Series, publisher Polish Statistical Association and Statistics Poland, August, 2020.

- **Refereeing Activity :** Electronic Journal of Statistics, Journal of Multivariate Analysis, Sankhya, Statistica Sinica, Statistics and Probability Letters, Journal of Statistical Planning and Inference, Canadian Journal of Statistics, Biometrika, Annals of Statistics, Journal of the American Statistical Association etc.

- Reviewer for Mathematical Reviews, American Mathematical Society.

Academic Administration

- Member: 2025, Grant Awarding Panel, Division of Mathematical Sciences, National Science Foundation.

- Member: 2024-present, ASA Edward C. Bryant Scholarship Committee.

- Departmental Representative: 2022-present, CASNR Curriculum Committee, IANR, University of Nebraska-Lincoln.

- Executive Director: 2022-present, International Indian Statistical Association.

Membership of Organising Committees

- Member: International Organising Committee, Annual Conference of the International Indian Statistical Association, Lincoln, Nebraska, June, 2025.

- Member: International Organising Committee, Annual Conference of the International Indian Statistical Association, Lincoln, Nebraska, June, 2025.

- Member: Programme Committee, SAE 20225 Conference, Politecnico De Torino, Turin, Italy, July, 2025.

- Member: International Organising Committee, Annual Conference of the International Indian Statistical Association, Kochi, December, 2024.

- Member: Programme Committee, SAE 2023-24 Conference, Pontificia Iniversidad Católica del Peru, June, 2024.

- Member: International Organising Committee, Annual Conference of the International Indian Statistical Association, Golden, CO, June, 2023.

- Member: International Organising Committee, Annual Conference of the International Indian Statistical Association, Bengaluru, December, 2022.

- Member: Programme Committee, SAE2022 Conference, University of Maryland, College Park, May 2022.

- Member: 2021-2023 IASS Nominating Committee, International Association for Survey Statisticians, 2021.

- Board Member: Asia-Pacific Seminar in Probability and Statistics, 2021.

- Co-Chair: Scientific Program Committee, International Indian Statistical Association Summer Conference, 2021.

- Chair: Organising Committee, Conference on Current Trends in Survey Statistics, Institute for Mathematical Sciences, National University of Singapore, 13th - 16th August 2019. This conference was a satellite conference to the 62nd ISI World Statistics Congress held in Kuala Lumpur, 18th-23rd August, 2019.

- Chair: Organising Committee, Programme on Statistical Data Integration, Institute for Mathematical Sciences, National University of Singapore, 5th - 16th August 2019.

- Member: Scientific Program Committee, International Indian Statistical Association Conference, 2017.

- Member: Scientific programme Committee, ISI Regional Statistics Conference 2017.

- Main organiser: Empirical Likelihood Based Methods in Statistics, Institute for Mathematical Sciences, National University of Singapore, 6 June - 1 July 2016.

- Member: International organising committee, International Conference organised by Institute of Applied Statistics Sri Lanka, December 2014, 2017.

- Member: International Statistical Institute Outreach Committee on South East Asia: 2014-present.

- Member: Scientific advisory committee, SAE 2013, The First Asian ISI Satellite Meeting on Small Area Estimation, September 2013.

- Member: Scientific programme committee, CFE 2012, 6th CSDA International Conference on Computational and Financial Econometrics, Oviedo, December, 2012.

- Member: New researchers committee, Institute of Mathematical Statistics: 2008-2011.

- Member: Organising committee, Singapore Conference on Statistical Science: Singapore.

- Member: Organising committee, Probability Approximations and Beyond : A Conference in Honour of Louis Chen on his 70th Birthday: Singapore, 2010.

- Member: Local organising committee, $7th$ World Congress in Probability and Statistics (jointly sponsored by Bernoulli Society and Institute of Mathematical Statistics) : Singapore, 2008.

Membership of Professional Organisations

- Fellow of The Royal Statistical Society : June 2004 - present.

- Institute of Mathematical Statistics : 2002 - present.

- International Biometric Society: 2015 - present.

- American Statistical Association: 2019 - present.

- International Statistical Institute: 2020 - present.

Invited Presentations

- "On a Bayesian Empirical Likelihood-based Method for Non-probability Sampling", Departmental seminar, Department of Mathematics, University of Maryland, College Park, USA, November 2025.

- "On an Empirical Likelihood-Based Solution to Approximate Bayesian Computation Problem", Departmental seminar, Department of Statistics, University of Florida, Gainesville, FL, USA, October 2025.

- "On a Bayesian Empirical Likelihood-based Method for Non-probability Sampling", JSM 2025 conference, Nashville, August 2025.

- "On a Bayesian Empirical Likelihood-based Method for Non-probability Sampling", SAE 2025 conference, Turin, Italy, July 2025.

- "Empirical Likelihood Under Mis-specification: Degeneracies and Random Critical Points", Statistics and Probability day, University of Maryland-Baltimore County, May, 2024.

- "On the Properties of the Gradient of Log Empirical Likelihood", Annual Conference of the International Indian Statistical Association, Kochi, India, December, 2024.

- "On an Empirical Likelihood-Based Solution to Approximate Bayesian Computation Problem", 2024 FCSM Research & Policy Conference, MD, USA, October 2024.

- "On an Empirical Likelihood-based Method for Complex Survey Data with Applications to Non-probability Sampling", Joint Statistical Meeting, August 2024.

- "On an Empirical Likelihood-based Method for Complex Survey Data with Applications to Non-probability Sampling", SAE 2023-24 conference, Lima, Peru, June 2024.

- "On an Empirical Likelihood-Based Solution to Approximate Bayesian Computation Problem", Departmental seminar, Department of Mathematics and Statistics, University of Maryland Baltimore County, Baltimore, MD, USA, December 2023.

- "Hamiltonian Monte Carlo In Bayesian Empirical Likelihood Computation", Departmental seminar, Department of Statistics, George Washington University, Washington DC, USA, November 2023.

- "On an Empirical Likelihood-Based Solution to Approximate Bayesian Computation Problem", Departmental seminar, Department of Mathematics, University of Maryland College Park, College Park, MD, USA, November 2023.

- "On an Empirical Likelihood-Based Solution to Approximate Bayesian Computation Problem", Departmental seminar, Department of Statistics, Iowa State University, Ames, IA, USA, November 2023.

- "On an Empirical likelihood-based Estimator for Complex Survey Data", ISI World Congress, Ottawa, Canada, July 2023.

- "Qualitative Comparison of dependencies for Graphical Markov Models", Departmental seminar, Department of Statistics, University of California, Davis, CA, USA, June,2022.

- "On an Empirical likelihood-based Estimator for Complex Survey Data", Annual Conference of the International Indian Statistical Association, Golden, Colorado, June, 2023.

- "On an Empirical Likelihood-Based Solution to Approximate Bayesian Computation Problem", Annual Conference of the International Indian Statistical Association, Bengaluru, December,2022.

- "On an Empirical Likelihood-Based Solution to Approximate Bayesian Computation Problem", Departmental seminar, Department of Statistics, University of California, Davis, CA, USA, June,2022.

- "On an Empirical likelihood-based Estimator for Complex Survey Data", SAE2022, May, 2022.

- "Covariance based Moment Equations for Improved Variance Component Estimation", SAE2021, September, 2021.

- "Hamiltonian Monte Carlo In Bayesian Empirical Likelihood Computation", Asia Pacific Seminars in Probability and Statistics, November, 2020.

- "On a Bayesian Empirical Likelihood Based Information Integration for Complex Survey Data", Topic contributed session, Joint Statistical Meeting, August, 2020.

- "On spectral distribution estimation by exponential tilting", Annual Conference of the International Indian Statistical Association, Mumbai, India, December, 2019.

- "Empirical Likelihood Under Mis-specification: Degeneracies and Random Critical Points", Departmental seminar, Department of Statistics, University of California, Davis, CA, USA, November, 2019.

- "Covariance based Moment Equations for Improved Variance Component Estimation", 62nd ISI World Congress, August, 2019.

- "An easy-to-use empirical likelihood ABC method", Third International Conference on Economics and Statistics, Taichung, Taiwan, June, 2019.

- "Covariance based Moment Equations for Improved Variance Component Estimation", Calcutta Triennial Conference, Calcutta, India, December, 2018.

- "Hamiltonian Monte Carlo in Bayesian Empirical Likelihood Computation", EAC-ISBA conference, Seoul, South Korea, July, 2018.

- "On the Properties of the Gradient of Log Empirical Likelihood", International Chinese Statistical Association Conference, Qingdao, China, June, 2018.

- "On Empirical Likelihood based Covariance Matrix Estimation", EcoSta Conference, Hong Kong, June, 2018.

- "A Conditional Empirical Likelihood Based Bayesian Method for Complex Survey Data", SAE 2018, Shanghai, China, June, 2018.

- "Covariance based Moment Equations for Improved Variance Component Estimation", Annual Conference of the International Indian Statistical Association, Gainesville, Florida, USA, May, 2018.

- "Empirical Likelihood for Respondent Driven Sampling", Annual Conference of the International Indian Statistical Association, Hyderabad, India, December, 2017.

- "Empirical Likelihood for Respondent Driven Sampling", Workshop on Robust inference for sample Surveys, Wollongong, Australia, July, 2017.

- "Bayesian Empirical Likelihood Based Analysis for Patterned Missing Data", International Chinese Statistical Association Conference, Chicago, USA, June, 2017.

- "A two-step Metropolis Hastings Method for Bayesian empirical likelihood computation", Contemporary Theory and Practice of Survey Sampling: Celebration of Research Contribution of J. N. K Rao , Kun Ming, China, May, 2017.

- "Hamiltonian Monte Carlo for Bayesian Empirical Likelihood Computation" Departmental seminar, Department of Statistics, University of California, Davis, USA, November, 2016.

- "A two-step Metropolis Hastings Method for Bayesian empirical likelihood computation", Annual Conference of the International Indian Statistical Association, Corvallis, USA, August, 2016.

- "A two-step Metropolis Hastings Method for Bayesian empirical likelihood computation", Cross-Strait statistics conference, Chengdu, China, July 2016.

- "Empirical Likelihood for respondent driven sampling", IMS-APRM meeting, Hong Kong, June, 2016.

- "Hamiltonian Monte Carlo for Bayesian Empirical Likelihood Computation" Departmental seminar, Department of Statistics, University of Minnesota, USA, February, 2016.

- "Hamiltonian Monte Carlo for Bayesian Empirical Likelihood Computation", Calcutta Triennial Conference, Calcutta, India, December, 2015.

- "Empirical Likelihood in Approximate Bayesian Computation", Annual Conference of the International Indian Statistical Association, Pune, India, December, 2015.

- "Empirical Likelihood for respondent driven sampling", 60th World congress of International Statistical Institute, Rio de Janeiro, Brazil, July, 2015.

- "Hamiltonian Monte Carlo for Bayesian Empirical Likelihood Computation" Monday Colloquium, Indian Statistical Institute, Calcutta, India, June, 2015.

- "Hamiltonian Monte Carlo for Bayesian Empirical Likelihood Computation" Departmental seminar, Department of Statistics, Oregon State University, USA, February, 2015.

- "Hamiltonian Monte Carlo for Bayesian Empirical Likelihood Computation" International conference organised by Institute of Applied Statistics Sri Lanka, Colombo, Sri lanka, December, 2014.

- "Empirical Likelihood in Approximate Bayesian Computation", Topic contributed session, Joint Statistical Meeting, Boston, USA, August, 2014.

- "Conditional Empirical Likelihood method for Complex Survey Data", 2nd Conference of the international society for nonparametric statistics, Cadiz, Spain, June, 2014.

- "On Bayesian Inference for Complex Survey Data", Conference honouring 70th birthday of Prof. Malay Ghosh, University of Maryland College Park, USA, May, 2014.

- "An empirical likelihood based approach to incorporate sampling weights and population level information", Department of Statistics, London School of Economics, UK, March, 2013.

- "Some results on comparison of dependence for Gaussian graphical Markov models", Department of Mathematics and Southampton Statistical Sciences Research Institute, University of Southampton, UK, March, 2013.

- "An empirical likelihood based approach to incorporate sampling weights and population level information", Department of Statistics, University of Washington, Seattle, USA, November, 2012.

- "Some results on comparison of dependence for Gaussian graphical Markov models", Department of Biostatistics, University of California, Los Angeles, USA, October, 2012.

- "An empirical likelihood based approach to incorporate sampling weights and population level information", Department of Statistics, University of California, Davis, USA, October, 2012.

- "An empirical likelihood based approach to incorporate sampling weights and population level information", Department of Statistics, University of California, Los Angeles, USA, October, 2012.

- "An empirical likelihood based approach to incorporate sampling weights and population level information", Department of Statistics, University of Florida, Gainsville, USA, September, 2012.

- "Empirical likelihood for small area estimation", Indian Science Congress, Bhubaneswar, India, January, 2012.

- "Empirical likelihoods for unit level models in small area estimation.", Colombo, December 2011.

- "A conditional empirical likelihood based approach to combine sampling design and population level information.", IISA JSM, Ralleigh, April 2011.

- "Empirical likelihood for small area estimation", First Singapore conference on statistical science, Singapore, November, 2010.

- "A conditional empirical likelihood based approach to combine sampling design and population level information.", Southampton Statistical Sciences Institute, Southampton, October 2010.

- "Empirical likelihood for small area estimation", International conference on statistical analysis of complex data, Kun Ming, China, July, 2010.

- "Empirical likelihood for small area estimation", 8th IISA JSM conference, Visakhapatnam, India, January 2010.

- "An empirical likelihood based approach to incorporate sampling weights and population level information", International conference on frontiers of interface between statistics and sciences, Hyderabad, India, January 2010.

- "Estimation of the minimum mean of normal populations under the tree order restriction", 7th international triennial symposium on Statistics and Probability, Calcutta university, India, December 2009.

- "Empirical likelihood for small area estimation", The 10th Islamic Countries Conference on Statistical Sciences, Cairo, Egypt, December 2009.

- "A conditional Empirical Likelihood based approach to combine sampling design and population level information.", Indian Statistical institute, Delhi, November 2009.

- "A 2-step empirical likelihood based approach for combining sample and population data in regression estimation", Department of Statistics, University of Florida, Gainsville, Florida, July 2009.

- "Qualitative inequalities for squared partial correlations of a Gaussian random vector", AMS regional conference, Urbana-Champagne, March 2009.

- "Testing equality of multivariate normal population with recursive graphical Markov structure", Monday Colloquium, Indian Statistical Institute, Calcutta, August 2008.

- "Estimation of the minimum mean of normal populations under the tree order restriction", Indian Statistical Institute, Delhi, December 2007.

- "On qualitative comparisons of dependence between d-connected vertices of a singly connected Gaussian DAG", Monday Colloquium, Indian Statistical Institute, Calcutta, December 2007.

- "On qualitative comparisons of dependence between d-connected vertices of a singly connected Gaussian DAG", New researchers Conference, Salt Lake City, July 2007. (*Invited poster presentation*)

- "An empirical likelihood-based approach to estimate covariance matrices with structural zeroes", Monday Colloquium, Indian Statistical Institute, Calcutta, June 2007.

- "A two-step empirical likelihood based approach for combining sample and population data in regression estimation", IISA JSM conference, Cochin, India, January, January 2007.

- "A 2-step empirical likelihood based approach for combining sample and population data in regression estimation", 6th international triennial symposium on Statistics and Probability, Calcutta university, India, December 2006.

- "Estimation of the minimum mean of normal populations under the tree order restriction", S.N. Roy Memorial Conference Calcutta, India, December 2006.

- "On qualitative comparisons of dependence between d-connected vertices of a singly connected Gaussian DAG", Chalmers Technical University, Gothenburg, Sweden, June 2006.

- "A 2-step empirical likelihood approach combining sample and population data in regression estimation", Monday Colloquium, Indian Statistical Institute, Calcutta, December 2005.

- "A 2-step empirical likelihood approach combining sample and population data in regression estimation", Annual meeting of the Population Association of America, Philadelphia, April 2005. (*Topic contributed presentation*)

- "On qualitative comparisons of dependence between d-connected vertices of a singly connected Gaussian DAG", Department of Statistics, University College London, London, England, September 2004.

- "On qualitative comparisons of dependence between d-connected vertices of a singly connected Gaussian DAG", Lancaster University, Lancaster, England, February 2004.

- "Estimation of the minimum mean of normal populations under the tree order restriction", *Monday Colloquium*, Indian Statistical Institute, Calcutta, September 2003.

- "Using the structure of d-connecting paths as a qualitative measure of the strength of dependence", $19th$ conference on uncertainty in artificial intelligence, 2003, Acapulco, Mexico, August 2003. (*Refereed poster presentation*)