



DEEPAK MAHADEO SAKATE

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Educational Background

- PhD (Statistics) Shivaji University, Kolhapur, India, 2014
Title: On Subset Selection in Regression for Count Data
Guide: Dr. D. N. Kashid
- M.Sc. (Statistics) Shivaji University, Kolhapur, India, 2009
- B.Sc. (Statistics) Shivaji University, Kolhapur, India, 2006

Other Qualification

- Qualified **National Eligibility Test (NET) for Lectureship** conducted by **CSIR-UGC, India**, Dec. 2008.

Professional Experience

- **Associate Professor:** Dec. 2019 till date. Department of Statistics and Applied Mathematics, Central University of Tamil Nadu, Thiruvarur, India (TN)
- **Assistant Professor:** Dec. 2010 to Dec. 2019. Department of Statistics, Shivaji University, Kolhapur, India (MS).
- **Postdoctoral Fellow:** Aug. 2015 to July, 2016. Department of Biostatistics and Epidemiology, Augusta University, Augusta, USA (GA)
- **Assistant Professor:** Dec. 2009 to Dec. 2010. Department of Statistics, School of Mathematical Sciences, North Maharashtra University, Jalgaon, India (MS).
- **Project Fellow:** July 2009 to Dec. 2009. Department of Statistics, Shivaji University, Kolhapur. (A major research project funded by University Grants Commission)

Administrative Responsibilities Held

- Coordinator, Post Graduate Diploma in Actuarial Science, Shivaji University, Kolhapur (AY 2014-15)
- Coordinator, M.Phil./Ph.D.(Statistics) Course, Shivaji University, Kolhapur (2018-19)
- Task Force Committee Member, International Affairs Cell, Shivaji University, Kolhapur (2016-19)

Prizes/Awards/Ranks etc. to the credit

- Stood **FIRST** in order of **MERIT** at M.Sc. (Statistics) Examination, Shivaji University, Kolhapur, 2009.
- Stood **FIRST** at Third Year B.Sc. Project competition conducted by SUSTA, 2006.
- Stood **SECOND** at Third Year B.Sc. level Quiz Competition conducted by SUSTA, 2006.
- Received **Certificate of Merit** in fourth National Science Olympiad, 2004.

Research Interests

- Robust estimation and model selection in Regression
- Nonparametric Inference

Research Papers Published

1. Sun, J., **Sakate, D. M.**, and Mathur, S. (2019). A nonparametric procedure for changepoint detection in linear regression, *Communications in Statistics - Theory and Methods*, DOI: 10.1080/03610926.2019.1657453.
2. Kamble T. S., Kashid D. N. and **Sakate D. M.** (2019) Consistent and robust variable selection in regression based on Wald test, *Communications in Statistics - Theory and Methods*, 48 (8), 1981-2000.
3. Koli, R. R., Phadatare, M. R., Sinha, B. B., **Sakate, D. M.**, Ghule, A. V., Ghodake, G. S., ... & Fulari, V. J. (2019). Gram bean extract-mediated synthesis of Fe₃O₄ nanoparticles for tuning the magneto-structural properties that influence the hyperthermia performance. *Journal of the Taiwan Institute of Chemical Engineers*, 95, 357-368.
4. Desai S. S., Kashid D. N. and **Sakate D. M.** (2018) Subset Selection in Nonlinear Poisson Regression using Support Vector Regression: A Simulation Study, *International Journal of Agricultural and Statistical Sciences*, 14 (1), 13-22.
5. Salamwade, R. L., **Sakate D. M.** and Mathur S. K. (2018) ϕ -Divergence loss based Artificial Neural Network, *Journal of Modern Applied Statistical Methods*, 17 (2), 7.
6. Mathur, S. K., and **Sakate, D. M.** (2017). A new test for two-sample location problem based on empirical distribution function. *Communications in Statistics-Theory and Methods*, 46 (24), 12345-12355.
7. **Sakate D. M.** and Kashid D. N. (2016) A New Robust Model Selection Method in GLM with Application to Ecological Data, *Environmental Systems Research*, 5:9.
8. Mathur S. K., **Sakate D. M.** and Datta S. (2016) A new scale-invariant nonparametric test for two-sample bivariate location problem with application. In *Robust Rank-Based and Nonparametric Methods*, Springer Proceedings in Mathematics & Statistics, 168, R.Y. Liu, J.W. McKean (eds.), 175-187.
9. **Sakate D. M.** and Kashid D. N. (2014) Comparison of Estimators in GLM with Binary Data, *Journal of Modern Applied Statistical Methods*, 13 (2), 185-200.
10. **Sakate D. M.** and Kashid D. N. (2014) A Deviance-Based Criterion for Model Selection in GLM, *Statistics: A Journal of Theoretical and Applied Statistics*, 48 (1), 34-48.
11. **Sakate D. M.** and Kashid D. N. (2013) Variable Selection via Penalized Minimum ϕ -Divergence Estimation in Generalized Linear models with Binary Data, *Journal of Applied Statistics*, 41 (6), 1233-1246.
12. **Sakate D. M.** and Kashid D. N. (2013). Model selection in GLM based on the distribution function criterion, *Model Assisted Statistics and Applications*, 8(4), 321-332.
13. **Sakate D. M.** Kashid D. N. and Shirke D. T. (2011). Subset Selection in Poisson Regression, *Journal of Statistical Theory and Practice*, 5(2), 207-219.

Research Papers under Preparation

1. Salamwade, R. L. and **Sakate, D. M.** Variable selection method for ZIP regression based on STEE.
2. Salamwade, R. L. and **Sakate, D. M.** Developed robust simultaneous estimation and variable selection method for ZIP regression based on STEE.
3. Saravate, T. and Sakate, D. M. Robust Nonparametric tests for two sample location problem based on ranked set sampling.
4. Salamwade, R. L., Mali, K. and Sakate, D. M. A review of variable selection methods in zero inflated Poisson regression.
5. Vanjare, S. and Sakate, D. M. Consistent variable selection in generalized linear models using R^2 .

Major Research Project (Ongoing)

1. Variable Selection in Zero Inflated Models for regression Analysis of Count Data, PI- **Dr. D. M. Sakate**, Funding Agency: DST-SERB under EEQ Scheme, Amount Mobilized: Rs. 16.91 Lakh, Duration: 07/03/2018 to 06/03/2021.

Teaching (2009-2019)

- *Post Graduate Teaching in Statistics*: Real Analysis, Statistical Computing, Multivariate Analysis, Probability Theory, Distribution Theory, Statistical Inference, Asymptotic Inference, Regression Analysis, Discrete Data Analysis, Generalized Linear Models, Data Mining, Stochastic Processes.
- *Post Graduate Diploma in Actuarial Science*: Statistical Methods, Probability and Mathematical Statistics, Statistical Models and their Applications.

Worked as a referee for:

- Statistics in Medicine
- SAR and QSAR in Environmental Research
- Journal of Applied Statistics
- Communications in Statistics: Theory and Methods
- Model Assisted Statistics and Applications
- Current World Environment

Membership of academic bodies

- Life Member, International Indian Statistical Association (IISA)
- Life Member, Indian Society for probability and Statistics (ISPS)
- Life Member, Shivaji University Statistics Teachers Association (SUSTA)

Knowledge of Software: R, MATLAB, SAS, SPSS, MINITAB, SYSTAT.

Paper Presentation in Conferences/Seminars/Symposium:

1. **“A new test for two sample location problem based on empirical distribution functions under ranked set sampling”** in “International Conference on Theory and Applications of Statistics and Information Sciences” during 5-7 Jan., 2018 held at Department of Statistics, Bharathiar University, Coimbatore.
2. **“Empirical distribution function based multivariate test for two sample location problem”** in ‘3rd International Conference on Innovative Research in Science and Technology’ during 7-8, Nov. 2017 held at Gopal Krishna Gokhale College, Kolhapur, India.
3. **“A goodness-of-fit test based on empirical distribution function”** in ‘National Seminar on Statistical Inference and Stochastic Modeling’ during 22-23 Feb., 2017 held at Karnataka University, Dharwad.
4. **“Variable Selection via Penalized ϕ -Divergence Estimation in Multinomial Logistic Regression”** in ‘National Seminar on Statistical Inference and Stochastic Modeling’ during 27-28, Feb. 2015 held at Karnataka University, Dharwad.
5. **“On the Robust Linear Regression in the Presence of Severe Multicollinearity and Non-normal Error Terms”** in ‘National Conference On Applied Statistics and related working practices’ during 30-31 Jan., 2014 held at North Maharashtra University, Jalgaon.
6. **“Robust Generalized Linear Model Selection using R-square”** in International Conference on Recent Advances in Statistics and their Applications (ICRASTAT-2013) along with 33rd Annual Convention of ISPS during 26-28 Dec., 2013 held at Department of Statistics, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.
7. **“Outlier Resistant Linear Regression Tolerance Intervals”** in ‘National Conference on New Horizons of Statistics’ during 19-21, Oct., 2013 held at Department of Statistics, Solapur University, Solapur.
8. **“A Robust Coefficient of Determination for GLM”** in ‘National Conference on Quality, Reliability and Optimization’ during 14-15 Feb., 2013 held at Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal, Sangli.
9. **“Robust Model Selection in GLM”** in ‘International conference on Frontiers of Statistics and its Applications’ (ICONFROST-2012) along with 32nd Annual Convention of ISPS during 21-23 Dec., 2012 held at Pondicherry University, Puducherry.
10. **“Comparison of Estimation Methods in GLM with Binary Data for Small Sample Size”** in ‘A National Seminar on Recent Developments in Statistical Modeling’ during 12-13, Oct. 2012 held at Department of Statistics, Shivaji University, Kolhapur.
11. **“Variable Selection in Negative Binomial Regression”** in ‘International Conference on Statistics and Information Analytics’ (ICSIA 2012) during 23-25 Aug. 2012 held at PG and Research Department of Statistics, Loyola College, Chennai.
12. **“Variable Selection via Penalized Minimum ϕ -Divergence Estimation in Generalized Linear models with Binary Data”** in ‘National Symposium on Statistics and its Applications for Young Researchers’ during 24-25 Feb. 2012 held at University of Madras Chennai.

13. **"A Deviance Based Criterion for Model Selection in GLM"** in 'International conference on Statistics, Probability and Related Areas' along with 31st Annual Convention of ISPS during 19-22 Dec. 2011 held at CUSAT, Cochin.
14. **"Subset Selection in Poisson Regression"** in 'National conference on Industrial Statistics and Computational Mathematics', during Jan. 21-23, 2010 held at North Maharashtra University, Jalgaon.

Invited Talks in Symposiums /Workshops

1. **"Applications of Correlation and Regression Techniques in Business and Marketing"** in one day workshop on Business Statistics: Scope and Applications at DRK college of Commerce, Kolhapur, 7th Feb., 2018.
2. **"Statistics in Medical Science"** in a Seminar on 'New Horizons in Statistics' on 7th Feb. 2017 held at Yashvantrao Chavan Institute of Science, Satara.
3. **"Applications of Statistics in Business and Marketing"** Guest Lecture at DRK college of Commerce, Kolhapur, 29th Aug., 2016.
4. **"Descriptive Statistics"** in 'Workshop on Applications of Statistics in Medical Research' during 19-20, Jan., 2015 held at University Research Cell, D. Y. Patil Education Society (Deemed University), Kolhapur.
5. Series of talks on **"Statistical Modeling and Graphics using R"** in 'Training Programme on Computational Statistics Using R' during 17-22, Nov. 2014 held at Department of Statistics, Shivaji University, Kolhapur.
6. **"Data Reduction Techniques"** in 'A National Symposium on Business Analytics and Data Mining' during 21-22 March, 2014 held at Department of Statistics, Shivaji University, Kolhapur.
7. **"Preparation for NET/SET Examinations"** in the Workshop on Preparation for SET/NET Examinations organized by Solapur University, Solapur on 29, Oct. 2013.
8. Series of talks on **"Graphics and Statistical Analysis Using R"** in the "National Workshop on Statistical Computing" organized by Department of Statistics, Solapur University, Solapur during 21-23, Sep. 2013.
9. **"Human Development Index"** in National workshop on "Research Methodology in the Area of Social Exclusion and Discrimination" organized by Centre for the Study of Social Exclusion and Inclusive Policy, Shivaji University, Kolhapur during 30-31, Aug. 2013.
10. **"Conway-Maxwell Poisson Regression"** in the "National Workshop on Techniques for Discrete Data Analysis" organized by Department of Statistics, Shivaji University, Kolhapur during 21-22, March, 2013.
11. Series of lectures on **"Clustering"** in the Department of Statistics, Central University of Rajasthan through **video conferencing mode** during 27th Feb. to 1st March, 2013.
12. **"Preparation for NET/SET Examinations"** in State level workshop on NET/SET Examination Guidance on 12 March, 2012 organized by Yashvantrao Chavan Institute of Science, Satara.
13. **"Essentials on programming elements and built in functions in SYSTAT"** in workshop on "MS-Excel and SYSTAT Software", Jan. 4-6, 2010 organized at M.J. College, Jalgaon.

Workshop/Seminar/Conference Organized:

1. **Member**, Organizing committee, “National Seminar on Statistical Modeling and Applications’ organized by Department of Statistics, Shivaji University, Kolhapur during 23-24 Feb, 2018.
2. **Member**, Organizing committee, “National Conference on Applied Statistics and Informatics’ organized by Department of Statistics, Shivaji University, Kolhapur during 10-11 March, 2017.
3. **Member**, Organizing committee, “International Students’ Meet: Exploring Educational Opportunities at Shivaji University’ organized by International Affairs Cell, Shivaji University, Kolhapur during 10-11 March, 2017.
4. **Member**, Organizing committee, “Industry Academia Meet’ organized by Shivaji University, Kolhapur during 9 March, 2017.
5. **Organizing Secretary**, “Training Programme on Computational Statistics Using R” organized by Department of Statistics, Shivaji University, Kolhapur during 17-22, Nov. 2014.
6. **Member**, Organizing committee, “A National Symposium on Business Analytics and Data Mining’ organized by Department of Statistics Shivaji University, Kolhapur during 21-22 March, 2014.
7. **Convener**, “National Workshop on Techniques for Discrete Data Analysis” organized by Department of Statistics, Shivaji University, Kolhapur during 21-22, March, 2013.
8. **Member**, Executive committee of National conference on Quality, Reliability and Optimization organized by Padmabhushan Vasantrodada Patil Mahavidyalaya, Kavathe Mahankal, Sangli during 14-15, Feb. 2013.
9. **Member**, Organizing committee, “A National Seminar on Recent Developments in Statistical Modeling” organized by Department of Statistics, Shivaji University, Kolhapur during 12-13, Oct. 2012.
10. **Member**, Organizing committee, Two-Day Workshop on “Formulation of Research Projects Proposals in Statistics” organized by Department of Statistics, Shivaji University, Kolhapur during 19-20 March, 2012.
11. **Member**, Organizing committee, “National conference on Industrial Statistics and Computational Mathematics”, Jan. 21-23, 2010 organized at NMU, Jalgaon.