

Curriculum Vitae:

Majid Jafari Khaledi

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SCHOLAR GOOGLE:

<https://scholar.google.com/citations?user=nZ2y3eQAAAAJ&hl=en>

Interesting:

Spatial Statistics, Space-Time Data Analysis, Bayesian Analysis.

Academic Qualifications:

- 1998 B.Sc. in Statistics, Allameh Tabatabaee University, Tehran, Iran.
- 2000 MSc. in Statistics, Tarbiat Modares University, Tehran, Iran.
- 2005 PhD. in Statistics, Tarbiat Modares University, Tehran, Iran.

Appointments Held:

- 2005-Present Assistant Professor in Tarbiat Modares University.

Courses Taught:

- Mathematical Analysis
- Probability Theory
- Statistics and Probability of Engineer

Administrative Experiences:

- 2008-2010 Head of Department of Statistics at Tarbiat Modares University.
- 2009-Present Educational Assistant of Faculty of Mathematical Sciences at Tarbiat Modares University.

PhD Project Supervision:

- 2013 Zareifard, H. Modeling and Analysis of Non-Gaussian Spatial Data Based on Scale Mixing of a Closed Skew Gaussian Random Field.
- 2017 Hoseinpouri, M. Bayesian Non-parametric Modeling of Spatial Data.
 - 2018 Boojari, H. Bayesian Analysis of Non-Gaussian Random Fields with NonHomogeneous Correlation Structure.

PhD Project Advisory:

- 2010 Afroughi, S. Analysis of Binary Spatial Data Using Auto logistic Model and Inverse Bayes Formula.
- 2011Naghizadeh, M. Estimating Parameters of Selected Population Under Bounded Loss Functions.
- 2013, Bashari, M. Interactions of Soil Clay Content and Impermeable Surfaces on Temporal Variation of Runoff and Sediment Under Simulated Conditions.

MSc Project Supervision:

- 2008 Farzaneh, N. Optimal Sampling Design for Spatial Prediction and Correlation Structure Estimation.
- 2008 Zare, F. Bayesian Spatial Prediction for Skew-Gaussian Model and Comparison with the Trans Gaussian Model.
- 2008 Zareifard, H. R. Bayesian Spatial Prediction in the Presence of Outliers Using a Generalised Gaussian Model.
- 2009 Mousivand, M. Bayesian analysis for Generalized Linear Geostatistical Models.
- 2009 Farahani, A. Bayesian Inference for Skew Normal Distribution.
- 2009 Nejati, H. Bayesian Model Selection using Bayes Factor.
- 2010 Haghshenas, F. Bayesian Analysis of Gaussian Markov Random Fields Using the Reference Prior.
- 2011 Naji, Z. Spatial Skew-Gaussian Regression.
- 2011 Hosseinpouri, M. Bayesian Analysis of Spatial Models Based on Censored Data
- 2011 Kaveh, M. Bayesian Analysis of Spatial Ordered Categorical Data Using Clipped Latent Variable Model.

- 2012 Talkhabi, M. Bayesian Analysis of Dynamic Hierarchical Spatio-Temporal Models with Multivariate Responses.
- 2012 Moradi, H. Bayesian Analysis of Multilevel Spatial Models with Varying Coefficients.
- 2012 Tadayon, V. Analysis of Non-Gaussian Spatial Models in the Presence of Censored Data
- 2012 Shahraki, S. Modeling of Trend Function in Spatial and Spatio-Temporal Regression Based on Kernel Averaged Predictors.
- 2013 Faridi, M. Inverse Bayes Formula for Analysis of Hierarchical Latent Variable Models.
- 2013 Roozbeh, M. Areal Spatial Data Analysis Using Generalized Linear Mixed Models.

MSc Project Advisory:

- 2007 Yadegari, I. Skew-Normal Distributions and its Properties.
- 2008 Zarei, S. Hierarchical Bayes Method for Small Area Estimation.
- 2012 Mahmoudi, I. Optimal Allocation Methods in Multivariate Stratified Sampling.

Publications:

1. Khaledi, M. J. and Mohammadzadeh, M., (2006), Bayesian Prediction in Spatial Data Analysis, Iranian Journal of Mathematical Sciences and Informatics, Vol. 1 No. 1, 33-46.
2. Khaledi, M. J. and Mohammadzadeh, M., (2006), Hierarchical Bayes Spatial Prediction for a Noisy Log-Gaussian, Journal of Statistical Theory and Applications, Vol. 5 No. 1, 9-16.
3. Khaledi, M. J. and Rivaz, F., (2006), Determination of Optimal Sampling Design for Spatial Data Analysis, Journal of Statistical Research of Iran (in Persian), Vol. 2 No. 1, 53-60.
4. Rivaz, F., Mohammadzadeh, M., and Khaledi, M. J. (2007). Empirical Bayes prediction for Space-Time Data under Separable Models. Journal of Statistical Research (in Persian), Vol. 1, No. 1, 45-61.
5. Yadegari, I., Gerami, A. and Khaledi, M. J. (2008). A generalization of the Balakrishnan skew-normal distribution. Statistics and Probability Letters, Vol. 78, 1165-1167.
6. Khaledi, M. J. and Rivaz, F. (2009). Empirical Bayes Spatial Prediction using a Monte Carlo EM Algorithm. Journal of Statistical Methods and Applications, Vol. 18, 35-47.
7. Zarei, S., Gerami, A. and Khaledi, M. J. (2009). Small Area Estimation of the mean of Household's Income in Selected Provinces of Iran with Hierarchical Bayes Approach. Journal of Statistical Research of Iran (in Persian), Vol. 4, 71-90.
8. Farzaneh, N. and Khaledi, M. J. (2008). Sensitivity Analysis of Spatial Sampling Design for Optimal Prediction. Journal of Statistical Research of Iran (in Persian). Vol 1, No 1, 1-19.

9. Khaledi, M. J. (2008). Bayesian Prediction in Geostatistical Models with Matern Correlation Function. *Iranian Journal of Science and Technology, Transaction A*, Vol. 32, No. A4, 305-311.
10. Afroughi, S., Faghihzadeh, S., Khaledi, M. J. and Ghandehari, M. (2010). Dental caries analysis in 3–5 years old children: A spatial modeling. *Archives of Oral Biology*, Volume 55, Issue 5, 374-378.
11. Zareifard, H. and Khaledi, M. J. (2010). Evaluation and application of the Gaussian-log-Gaussian spatial model for robust Bayesian prediction of Tehran air pollution data. To appear in *Journal of Statistical Research of Iran* (in Persian).
12. Rivaz, F., Mohammadzadeh, M., and Khaledi, M. J. (2011). Spatio-temporal modeling and prediction of CO concentrations in Tehran city. *Journal of Applied Statistics*, 38, 1995-2007.
13. Afroughi, S. Faghihzadeh, S. Khaledi, M. J., Motlaghd, M. G. Hajizadeh, E. (2011). Analysis of clustered spatially correlated binary data using autologistic model and Bayesian method with an application to dental caries of 3-5 year old children. *Journal of Applied Statistics*, 38, 2763-2774.
14. Kaveh, M. and Khaledi, M. J. (2013). Estimation in truncated GLG model for ordered categorical spatial data using the SAEM algorithm. *Communication in Statistics, Simulation and Computation* (In Press).
15. Zareifard, H. and Khaledi, M. J. (2013). Empirical Bayes estimation in regression models with generalized skew-slash errors. *Communication in Statistics, Theory and Methods*, 42: 1105–1123.
16. Zareifard, H. and Khaledi, M. J. (2013). Non-Gaussian modeling of spatial data using scale mixing of a unified skew Gaussian. *Journal of Multivariate Analysis*, 114; 16–28.
17. Afroughi, , Motlaghd, M. G. Faghihzadeh, S., Khaledi, M. J. (2013). A model for analyzing spatially correlated binary data clustered in uncorrelated lattices. *Statistical Methodology*, Volume 14, Pages 1-14.

18. M Parsaeian, F Farzadfar, H Zeraati, M Mahmoudi, G Rahimighazikalayeh, M. Jafari Khaledi (2014). APPLICATION OF SPATIO-TEMPORAL MODEL TO ESTIMATE BURDEN OF DISEASES, INJURIES AND RISK FACTORS IN IRAN 1990–2013 (STUDY PROTOCOL), ARCHIVES OF IRANIAN MEDICINE 17 (1), 28-32.

19. MJ Khaledi, H Zareifard, F Rivaz (2014). Bayesian Prediction in Clipped GLG Random Field Using Slice Sampling Journal of Statistical Theory and Applications 13 (2), 151-161

20. M Kaveh, M Jafari Khaledi (2014) Estimation in truncated GLG model for ordered categorical spatial data using the SAEM algorithm. Communications in Statistics-Simulation and Computation 43 (3), 528-537

21. F Rivaz, MJ Khaledi (2015). Bayesian spatial prediction of skew and censored data via a hybrid algorithm. Journal of Applied Statistics 42 (9), 1993-2009

22. V Tadayon, MJ Khaledi (2015). Bayesian analysis of skew Gaussian spatial models based on censored data. Communications in Statistics-Simulation and Computation 44 (9), 2431-2441

23. H Zareifard, H Rue, MJ Khaledi, F Lindgren (2016). A skew Gaussian decomposable graphical model. Journal of Multivariate Analysis 145, 58-72

24. H Boojari, MJ Khaledi, F Rivaz (2016). A non-homogeneous skew-Gaussian Bayesian spatial model. Statistical Methods & Applications 25 (1), 55-73

25. F Rivaz, MJ Khaledi (2017). Likelihood Inference in A Multivariate Spatial GLMM with Skew Gaussian Random Effects Using the Slice-SAB Algorithm. *Journal of Statistical Theory and Applications* 16 (1), 108-116
26. F Rivaz, MJ Khaledi (2017). Monte Carlo approximation of likelihood function in spatial GLMMs through an empirical Bayes method. *Communications in Statistics-Simulation and Computation* 46 (2), 1322-1335
27. H Zareifard, MJ Khaledi, F Rivaz, MQ Vahidi-Asl (2018). Modeling skewed spatial data using a convolution of Gaussian and log-Gaussian processes. *Bayesian Analysis* 13 (2), 531-557
28. M Bashiri, HR Moradi, MM Kheirkhah, M Jafari-Khaledi (2018). The effects of soil clay content, surface rock fragments and their interactions on runoff and sediment yield during rainfall simulation. *Desert Ecosystem Engineering Journal* 1 (2), 67-79
29. M Hosseinpouri, MJ Khaledi (2019). An area-specific stick breaking process for spatial data. *Statistical Papers* 60 (1), 199-221
30. H Zareifard, MJ Khaledi, O Dahdouh (2019). Multivariate spatial modelling through a convolution-based skewed process. *Stochastic Environmental Research and Risk Assessment* 33 (3), 657-671
31. Z Barzegar, F Rivaz, J Khaledi (2019). A Skew-Gaussian Spatio-Temporal Process with Non-Stationary Correlation Structure. *Journal of The Iranian Statistical Society* 18 (2), 63-85

32. S Izadi, H Sohrabi, MJ Khaledi (2020) Estimation of coppice forest characteristics using spatial and non-spatial models and Landsat data. *Journal of Spatial Science*, 1-14

33. O Dahdouh, MJ Khaledi (2020). Generalized spatial stick-breaking processes *Communications in Statistics-Simulation and Computation*, 1-20

H Zareifard, MJ Khaledi (2021). A Heterogeneous Bayesian Regression Model for Skewed Spatial Data. *Spatial Statistics*, Accepted.

35. M Parsaeian, MJ Khaledi, F Farzadfar, M Mahdavi, H Zeraati, M Mahmoudi, A Khosravi, K Mohammad (2021) Spatio-temporal analysis of misaligned burden of disease data using a geo-statistical approach. *Statistics in Medicine*. In Press.

Selected Conferences:

1. Mohammadzadeh, M., Khaledi, M. J. and Rivaz, F. (2006), Bayesian Spatial Prediction by Model Averaging, Proceedings of the ISBA 8th World Meeting on Bayesian Statistics, Benidorm, Spain.

2. Rivaz, F., Mohammadzadeh, M., and Khaledi, M. J., (2006), Space-Time Bayesian Prediction for Separable Random Fields, Proceedings of the 8th Iranian Statistical Conference, Shiraz University, Iran, 42-51.

3. Khaledi, M. J. and Rivaz, M., (2006), Spatial Prediction using Bayesian Model

Averaging, Proceedings of the 8th Iranian Statistical Conference, Shiraz University, Iran, 33.

4. Hosseinpouri, M. and Khaledi, M. J., (2010). Stochastic Approximation Boosting Algorithm for Spatial Censored Data. Proceedings of of the 41st Annual Iranian Mathematics Conference, University of Urmia, Urmia, Iran.

5. Hosseinpouri, M. and Khaledi, M. J., (2010). Monte Carlo Approximation of Likelihood Function in Spatial Models with Censored Data (In persian). Proceedings of of the 41st Annual Iranian Mathematics Conference, University of Urmia, Urmia, Iran.

6. Farahani, A. F. and Khaledi, M. J. (2010). Bayesian Inference of Skew-Normal Distribution Based on Non-central t distribution for Skewness parameter (in persian), Proceedings of the 10th Iranian Statistical Conference, Tabriz, Iran, 337-348.

7. Hosseinpouri, M. and Khaledi, M. J. (2010). Bayesian Analysis of Censored Spatial Data Using Data Augmentation. (in persian), Proceedings of the 10th Iranian Statistical Conference, Tabriz, Iran.

8. Zareifard, H. and Khaledi, M. J. (2010). Robust Bayesian Estimation of Spatial Regression Parameters Using a Heavy-tailed Distribution for Nugget Effect Term. (in persian), Proceedings of the 10th Iranian Statistical Conference, Tabriz, Iran.

9. Naji, Z. and Khaledi, M. J. (2010). Likelihood Inference in Trans-Gaussian Spatial Regression Using EM Algorithm. (in persian), Proceedings of the 10th Iranian Statistical Conference, Tabriz, Iran.