SREEDEVI E. P.

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PRESESNT POSITION

Assistant Professor, Department of Statistics, Cochin University of Science and Technology, Cochin, Kerala.

EDUCATION

- **Post Doctoral Work:** Pondicherry University, Pondicherry, India
- **PhD in Statistics (awarded on 19th February 2011) :**
  - Thesis title- Modeling and Analysis of Competing Risks Data
  - Institution- Cochin University of Science and Technology, Kerala.
  - Supervisor- Prof.(Dr.) P.G.Sankaran, Pro Vice Chancellor
    (Former HOD, Dept. of Statistics)
    Cochin University of Science and Technology, Kerala.
- **M.Sc Statistics :** Cochin University of Science and Technology, Kerala
- **B.Sc Mathematics :** Calicut University, Kerala.

EXPERIENCE

- **March 2023- Till date**: Assistant Professor, Department of Statistics , Cochin University of Science and Technology, Kerala.
- **June 2022- March 2023**: Assistant Professor, Department of Statistics , Maharaja's College, Ernakulam, Kerala, India.
- **March 2017-June 2022**: Assistant Professor, Department of Statistics, SNGS College, Pattambi, Kerala, India.
- **June 2012-March 2017**: Assistant Professor, Department of Statistics, Carmel College, Thrissur, Kerala, India.
- **July 2011-June 2012:** Post Doctoral Researcher, Department of Statistics, Pondicherry University.
- **April 2010-Jully 2011:** Take a break from career due to family reasons.
- **April 2007-April 2010:** Part-time Research Student in the Department of Statistics, Cochin University of Science and Technology, Kerala.
- **April 2007-August 2008:** Technical Assistant and Mathematical Modeler in the Biodiversity Research group in Nova Scotia Agricultural College, Truro, Canada.

- **August 2005-April 2007:** Full-time Research Student in the Department of Statistics,Cochin University of Science and Technology, Kerala.
- **October 2004-August 2005:** Project Fellow in research project entitled 'Neural network models in Applied Forestry Research' at Kerala Forest Research Institute, Peechi, Kerala.

PROFESSIONAL RECOGNITION (AWARDS/HONORS)

- Sanctioned a Minor Research Project as Principal Investigator on 'Modeling and analysis of cure data with different patterns of incompleteness' under SMNRI grant by **Cochin University of Science and Technology of Rs 1,40,000/-**
- **Best paper presentation award** in Mathematical Science Section at 33rd Kerala Science Congress January 2021.
- **Travel Grant from SERB under ITS Scheme** to attend 11th International Conference on Mathematical Methods in Reliability held at City University, Hong Kong from 3-7 June 2019.
- Sanctioned a Major Research Project as Principal Investigator on 'Statistical Analysis of Time to event Data Under Censoring and Truncation' by **Kerala State Council for Science, Technology and Environment (KSCSTE) of Rs 16,82,000/-**
- **Travel Grant from KSCSTE** to attend International Conference on Mathematical Methods in Reliability held at University of Grenoble, France form 3-6 July 2017.
- Selected **FLAIR member (Fostering Linkages in Academic Innovations and Research –**A new initiative in Higher Education by Govt. of Kerala to boost research and teaching skills of faculty across the state) in **2016-17.**
- **Kerala State Young Scientist Award** in **Mathematical Sciences** for the year 2015 by **Kerala State Council for Science, Technology and Engineering**.
- Availed fund to **visit ISI Delhi** for Collaborative research in April 2014 under **Young Scholar Visit Programme.**
- Selected for **Assistant Professor position under UGC Faculty recharge Programme**-2013
- Selected for the **Young Statistician's show case session presentation** as the author of the best paper in student competition from **Asian/Australian region** in the International Biometric Conference held at Kobe, Japan during August 25-31, 2012.
- Best paper presentation award in the **National Conference on Recent Developments in the Applications of Reliability Theory and Survival Analysis** held at Pondicherry University 2012.
- **NBHM post doctoral research fellowship** for Mathematical Sciences in 2011
- **UGC's Dr.D.S. Kothari post doctoral research fellowship** in Mathematical Sciences in 2011
- **PhD research fellowship** in Mathematical Sciences by Kerala State Council for Science, Technology and Environment in 2004.

MEMBER IN

(i) Indian Science Congress Association
(ii) International Biometric Society
(iii) International Statistical Institute
(iv) International Indian Statistical Association
(v) Indian Society for Probability and Statistics

CONSULTANCY WORKS

Project in Reliability Studies on Sonar Transducer Encapsulant Materials funded by National Petroleum Chemical Laboratory, Cochin, Kerala, India.

FINANCIAL SUPPORT FROM UGC

- A one day national seminar on the topic '**Statistics in Medical Science and Engineering'**- Sanctioned 1,35,000 Rs as **Organizing secretary**.
- A minor research project entitled **'Analysis of competing risks data with mixture models and masking'-**Sanctioned 1,90,000 Rs **as Principal Investigator**

CONFERENCES/SYMPOSIUMS

- **IMPORTANT INVITED TALKS**

    - **International Indian Statistical Association Conference** held at Banglore in December 2022.
    - **International Virtual Conference on Advanced Statistical Techniques in Business and Industry** organized by Cochin University of Science and Technology in December 2020.
    - **International Virtual Conference on Prof. C.R.Rao's thought on Statistical Sciences** organized by Pondicherry Central University in November 2020.
    - **International Indian Statistical Association Conference** held at Mumbai in December 2019.
    - **International Conference on Mathematical Methods in Reliability** held at City University, Hong Kong in June 2019.
    - **International Indian Statistical Association Conference** held at Hyderabad in 2017.
    - **International Indian Statistical Association Conference** held at Pune in 2015.
    - **International Indian Statistical Association Conference** held at Chennai in 2013.

- **International Biometric Conference** held at Kobe, Japan in 2012.

- **IMPORTANT CONTRIBUTORY TALKS**

  - **International Conference on Mathematical Methods in Reliability** held at Grenoble, France in July 2017.
  - **International Biometric Society-Indian Region Conference** held at Pondicherry in 2012
  - **XXXI Annual convention of ISPS and International Conference on Statistics, Probability and Related Areas** held at Cochin in 2011
  - **IISA- Joint Statistical Meeting and International Seminar** held at Cochin in 2007

Number of Conferences attended with Presentations: 15
International-12; Natioanl-1; State level-2
Number of Conferences attended without Presentations: 11

TRAINING PROGRAMS ATTENDED

- Attended a 14 day online NEP Orientation and Sensitization Programme from 01-12-24 to 14-12-24 conducted by Human Resource Development Center, University of Kerala.
- Attended a 14 day online **Refresher Course** on Curriculum Design, Development and Assessment conducted by MHRD-TLC, Calicut University from 09-10-2020 to 22-10-2020.
- Attended a 14 days UGC Sponsored **Refresher Course** in Citation Networks and Explanatory Data Analysis Using R held at Academic Staff College, University of Kerala, Thiruvananthapuram from 18-02-2020 to 02-03-2020.
- Attended a 21 days UGC Sponsored **Interdisciplinary Refresher Course** in Computer Science, Mathematics and Statistics held at Academic Staff College, University of Calicut from 10-08-2016 to 30-08-2016.
- Attended a 21 days UGC Sponsored **Summer School** held at Academic Staff College, University of Kerala, Thiruvananthapuram from 28-05-2015 to 17-06-2015.

GUIDANCE FOR PHD

Number of students registered for PhD – 3

- Vaisakh K. M. - Topic: Goodness of tests for lifetime distribution using Steins type characterization
- Jenet Geroge - Dynamic survival prediction using landmark models.
- Kaladharan P. V. – A study on novel computational approaches for the analysis of survival data

LIST OF PUBLICATIONS

Published/ Accepted for Publication

1. Silpa K., Sreedevi E. P. and Sankaran P. G. (2024) **Defective regression models for cure rate data with competing risks**, Journal of Biopharmaceutical Statistics, https://doi.org.10.1080/10543406.2024.2424838.
2. Midhu N.N., Isha Dewan, Sudheesh K. K. and Sreedevi E. P. (2024) **On approximation and estimation of distribution function of sum of independent random variables**, Statistical Papers, 65,1437-1467.
3. Sankaran P. G., Ashlin Mathew P. M. and Sreedevi E. P. (2024) Comparison of cause specific rate functions of panel count data with multiple modes of failure, Statistics and Applications, 22 (2), 47-61.
4. Ashlin Mathew P. M., Sankaran P. G. and Sreedevi E. P. (2024) **Semiparametric regression analysis of panel count data with multiple modes of recurrence,** Annals of Data Science, Published Online: https://doi.org/10.1007/s40745-024-00522-7 , 1-20.
5. Sudheesh K.K., Sreedevi E.P. and N. Balakrishnan. (2024) **Relationships between cumulative entropy/extropy, Gini mean difference and probability weighted moments,** Probability in Engineering and Informational Sciences, 38(1), 28-38.
6. Sankaran P.G. , Hari S. and Sreedevi, E. P. (2024) **Semiparamertic regression analysis of doubly censored recurrent event data,** Japanese Journal of Statistics and Data Science, 7, 183-202.
7. Vaisakh K. M.,Thomas Xavier and Sreedevi E. P., (2023) **Goodness of fit tests for Rayleigh distribution with censored observations**, Journal of the Korean Statistical Society, 52, 794-815.
8. Vaisakh K. M., Sreedevi E. P. and Sudheesh K. K. (2023) **A new goodness of fit test for gamma distribution with censored observations**, Communication in Statistics-Simulation and Computation. Published Online: https://doi.org/10.1080/03610918.2023.2245180, 1-14.
9. Smitha S. and Sudheesh K .K. and Sreedevi E. P. (2023) **Dynamic cumulative residual entropy generating function and its properties**, Communications in Statistics- Theory and Methods, Published Online: https://doi.org/10.1080/03610926.2023.2235448, 1-21.
10. Sreedevi E. P. and Sudheesh K. K. (2023) **A new goodness of fit test for uniform distribution with censored observations**, Journal of Korean Statistical Society, 52, 382-394.
11. Sreelaksmi N. and Sreedevi E. P. (2023) **A new JEL ratio test for independence of time to failure and cause of failure of competing risks,** Statistica, 83(1), 27-39.
12. Sudheesh K.K., Sreedevi E.P. and N. Balakrishnan. (2022) **A generalized measure of cumulative residual entropy,** Entropy, 24(4), 444.
13. Sudheesh K.K. and Sreedevi E.P. (2022) **Non-parametric estimation of cumulative (residual) extropy,** Statistics and Probability Letters, 185, 109434.
14. Sreedevi E. P., Sudheesh K.K. and Isha Dewan (2021) **A nonparametric test for independence of time to failure and cause of failure for discrete competing risks data,** Statistics**,** 55(5), 1107-1122.

15. Sreedevi E.P. and Sankaran, P.G. (2021) **Nonparametric inference for panel countdata with competing risks**, Journal of Applied Statistics, 48(16), 3102-3115.
16. Sreedevi E.P. and Sankaran, P.G. (2021) **Statistical methods for estimating cure fraction of COVID-19 population in India.** Model Assisted Statistics and Applications, Special Issue on Pandemics, 16(1), 59-64.
17. Sankaran P.G., Ashlin Mathew, P.M. and Sreedevi E.P. (2020) **Cause specific rate functions for panel count data with multiple modes of recurrence,** Journal of Indian Statistical Association, 58(2), 193-211**.**
18. Sreedevi.E.P., Sankaran,P.G. and Dewan, I. (2019) **Comparison of cumulative incidence functions of current status competing risks data with discrete observation times,** Communications in Statistics-Theory and Methods, 48 (23), 5766-5776
19. Sreedevi.E.P., Sankaran,P.G. and Dewan, I. (2017) **A Semiparametric Regression model for the analysis of current status competing risks data** , Journal of Indian Statistical Association, 55 (1), 35-62.
20. Sankaran,P.G., Dewan, I. and Sreedevi.E.P. (2017) **A martingale based test for independence of time to failure and cause of failure in competing risks models,** Communications in Statistics- Theory and Methods, 46(16), 8178-8186.
21. Sankaran. P.G. and Sreedevi.E.P (2016) **A proportional hazards model for the analysis of doubly censored competing risks data,** Communications in Statistics-Theory and Methods, 45 (10**),** 2975-2987.
22. Sankaran, P.G., Dewan, I. and Sreedevi. E.P. (2015) **A nonparametric test for stochastic dominance using total time on test transform ,** American Journal of Mathematical and Management Sciences**,** 34, 162-183.
23. Dewan, I. Sankaran, P. G. and Sreedevi, E. P. (2015) **On testing independence of failure time and cause of failure in a competing risks model for grouped data,** Journal of Applied Statistical Sciences,21(3), 291-305.
24. Sreedevi, E.P., Sankaran,P.G. and Dhanavanthan,P. (2014) **A nonparametric test for comparing cumulative incidence functions of current status competing risks data**, Journal of Statistical Theory and Practice, 8, 743-759.
25. Sreedevi.E.P and Sankaran,P.G. (2013) **Analysis of competing risks data using neural network models,** International Journal of Statistics and Its Applications**,** 3(4),123-131.
26. Sreedevi, E.P., Sankaran,P.G. and Dhanavanthan, P. (2012) **A nonparametric test for independence of time to failure and cause of failure of current status competing risks data,** Culcutta Statistical Association Bullettin, 64, 255-267**.**
27. Sreedevi, E. P. and Sankaran, P. G. (2012) **A semiparametric Bayesian approach for the analysis of competing risks data**, Communications in Statistics-Theory and Methods, 41(15) ,2803-2818.
28. Sankaran, P. G., Nair, N. U. and Sreedevi, E. P. (2010) **A quantile based test for comparing cumulative incidence functions of competing risks models,** Statistics and Probability Letters, 80 (9-10), 886-891.

Communicated Research works

1. A proportional mean model for panel count data with multiple modes of failure (Jointly with Sankaran P. G.).
2. Semiparametric linear transformation models for competing risks data with cure fraction (Jointly with Sudheesh K. K. and Sankaran, P. G).
3. On testing independence of time to failure and mode of failure of panel count data with multiple modes of recurrence (Jointly with Ashlin Mathew P. M. and Sankaran P.G.).
4. Proportional hazards model for zero inflated cure rate data (Jointly with Rejani P. P. and Sankaran P. G.).
5. Goodness of fit tests for inverse Gaussian distribution in presence and absence of censoring (Jointly with Vaisakh K. M. and Thomas Xavier)
6. Weighted cumulative residual entropy generating function and its properties (Jointly with Smitha S. and Sudheesh K.K.)
7. Accelerated mean model for panel count data with multiple modes of recurrence and informative observation process (Jointly with Ashlin Mathew P. M. and Sankaran P.G.).
8. Regression analysis of cure rate models with competing risks subjected to interval censoring (Jointly with Silpa K. and Sankaran P.G.)

Technical reports Published

1. Sankaran, P. G., Dewan, I. and Sreedevi, E. P.(2009) **A class of general tests for testing independence of failure time and cause of failure in a competing risks model**, Indian Statistical Institute, New Delhi.
2. Sankaran, P.G., Sunoj, S. M. and Sreedevi, E. P. (2005) **A study of population changes in corporation of Cochin**, Centre for Population Studies, Cochin.

Proceedings in National/Regional level Conference

1. Sreedevi.E.P. (2015) **On current status competing risks data with covariates,** Proceedings of 27th Kerala Science Congress, Alappuzha, 1742-1761.
2. Sreedevi.E.P. and Sankaran, P.G. (2014) **A nonparametric test for comparing cumulative incidence functions of current status competing risks data,** Proceedings of 26th Kerala Science Congress, Wayanad, 4228-4247.

Chapters in Book

1. Sreedevi.E.P (2016) On Comparing causes of failure of current status competing risks data, **Infinitude: Frontiers of Research in Mathematics, Statistics and Computer Science,** UGC-HRDC, University of Calicut. ISBN:978-81-9107-062-7