

**NAME: Dr.E.Sandhya**

**Designation: Associate Professor of Statistics**

**Department : Statistics**

**Innovations/ Contributions in Teaching :**

1. Structured the syllabus for subsidiary Statistics for B.Sc. (Psychology) in 2000 of the University of Calicut.
2. Was part of the committee in drafting the syllabus for B.Sc. Core and Complementary Statistics for Psychology, Computer Science and Geography under Choice Based Credit and Semester System of the University of Calicut.
3. Teaching. Special effort is taken to bridge the gap between theory and practice of Statistics by introducing the students to data collection and analysis to arrive at a sound conclusion from the data using Statistical principles and software packages.

**Publications (with details)**

**(a) Books nil**

**(b) Papers - as given below.**

***International***

1. An Invited chapter in a Book: Semi-stability of sums and maximums in samples of random size, Satheesh, S and Sandhya, E; **Chapter-3 in Focus on Probability Theory, Editor - Louis R. Velle, 43–72, Nova Science Publishers, New York, 2006.**
2. Sandhya E and Prasanth ,C B(2014) Marshall –Olkin Discrete Uniform Distribution ,Journal of Probability, ,<http://dx.doi.org/10.1115/2014/979312>
3. Sandhya E and Prasanth ,C B (2013) *Harris Discrete Uniform Distribution*, in proceedings of World Congress on Research and Innovations, 17-20 december 2013, St.Joseph College, Thrissur. Excel India Publications.
4. Sandhya, E and Lovely Abraham T (2013) Some characterizations of Harris distribution, JKSA,2,53-56
5. Bakouch, H S; Ristic, M M, Sandhya, E and Satheesh, S (2013), Random products and product auto-regression, ***Filomat*, 27:7**, 1197-1203.
6. Sandhya E and Rajasekharan, K E (2012), On the measure of memory of discrete distributions under change of origin and scale, ***IJMSEA*, 6**, 293-301.
7. Sandhya E and Rajasekharan, K E (2012), On discrete distributions with gaps having ALM property, ***ProbStat Forum*, 5**, April 2012, 32-37.
8. Sandhya E and Prasanth C B(2012) *A Generalized Geometric Distribution* in proceedings of an International Conference on Frontiers of Statistics and its applications[ICONFROST-2012]& 32<sup>nd</sup> annual Conference of Indian Society for Probability and

Statistics[ISPS], Department of Statistics, Pondicherry University. December 21 -23, 2012.  
(Bonfring Publication)

9. Satheesh, S, Sandhya E and Prasanth C B A Generalization of the Marshal-Olkin Scheme and Related Processes, Collection of Recent Statistical Methods and applications, 2012, pp.12-17, Publication of department of Statistics, University of Kerala.
10. Satheesh, S and Sandhya, E (2011), A generalization of random self-decomposability, in ***Proceedings of the International Conference on Mathematical Sciences in honour of Prof. A M Mathai***, 333-340, Department of Statistics, St. Thomas College, Pala, 2011.
11. Satheesh, S; Sandhya, E and Lovely Abraham T (2010). Random infinite divisibility on  $Z^+$  and generalized INAR (1) models, ***ProbStat Forum***, **3**, July 2010, 108-117.
12. Satheesh, S; Sandhya, E and Lovely Abraham T (2010). Limit distributions of random sums of  $Z_+$ -valued random variables, ***Communications in Statistics – Theory and Methods***, **39**, 1979–1984.
13. Sherly, S, Jose, M. K., Sandhya, E. and Raju, N (2009). An application of Harris distribution to telephone data, ***STARS International Journal (Science)***, **3**, 61-70.
14. Satheesh, S and Sandhya, E (2009). Geometric gamma max-infinitely divisible models, ***International Journal of Agricultural and Statistical Sciences***, **5**, 99-105.
15. Satheesh, S and Sandhya, E (2008). Semi-selfsimilar processes on  $R$  and  $I_0$ , ***International Mathematical Forum***, **3**, 1781-1784.
16. Sherly, S, Jose, M. K., Sandhya, E. and Raju, N. (2008). Harris processes, ***International Journal of Agricultural and Statistical Sciences***, **4**, 63-72.
17. Satheesh, S and Sandhya, E and Rajasekharan K E (2008). A generalization and extension of an autoregressive model, ***Statistics and Probability Letters***, **78**, 1369-1374.
18. Sandhya, E and Satheesh, S (2008). Geometric generalized gamma distributions and related processes, ***Applied Mathematical Sciences***, **2**, 63-71.
19. Devarajan, M K; Sandhya, E and Mani K P (2007). Time Series Analysis of Reservoir-Associated Seismicity: a Case study from the Idukki area, Kerala, ***Gondwana Geological Magazine***, **V.22 (2)**, December 2007, 79-84.
20. Satheesh, S and Sandhya, E (2007). Corrections to “Semi-selfdecomposable laws and related processes, Satheesh, S and Sandhya, E, JISA (2005)”, ***Journal of the Indian Statistical Association***, **45**, 123-127.
21. Satheesh, S and Sandhya, E (2007). A max-autoregressive model with max-semi-stable marginals, ***International Journal of Agricultural and Statistical Sciences***, **3**, 79-83.

22. Sandhya, E; Sherly, S; Jose, M. K and Raju, N. (2007). Characterizations of the extended geometric, Harris, negative binomial and gamma distributions, ***STARS International Journal (Science)***, **1**, 5-17.
23. Satheesh, S, Sandhya, E. and Sherly, S. (2006). A generalization of stationary AR(1) schemes, ***Statistical Methods***,**8**, 213-225.
24. Satheesh, S and Sandhya, E (2006).Max-semi-selfdecomposable laws and related processes, ***Statistics and Probability Letters***, **76**, 1435 – 1440.
25. Satheesh, S and Sandhya, E (2005). Semi-selfdecomposable laws and related processes, ***Journal of the Indian Statistical Association***, **43**, 157 – 166.

### ***National***

1. Sandhya, E and Lovely Abraham T (2013) Some characterizations of Harris distribution, ***JKSA***,**2**,53-68
2. 2)Sherly, S, Jose, M. K., Sandhya, E and Raju, N (2009). Harris distribution as a member of generalized power series family, ***Journal of the Kerala Statistical Association***, **20**, 12-22.
3. 3)Satheesh, S and Sandhya, E (2007). An autoregressive model with semi-stable marginals, ***ProbStat Models***, **6**, January-2007, 1-5.
4. 4)Sandhya, E and Pillai, R N (2003). Renewal theory and geometric infinite divisibility, ***ProbStat Models***,**2**, May-2003, 1-8.

### **Participation in Courses/ Seminars/ Workshops.**

1. Workshop in Data Analysis at Sree Kerala Varma College, Thrissur, in March 2004.
2. Short Course in Econometrics in May 2005 at John Mathai Centre, Thrissur and
3. Orientation Training Course for the Program Officers of the NSS at Rajagiri College of Social Sciences, Kalamasseri in October 2004.
4. Three-day Workshop-cum-Seminar on Probability and Statistics, Department of Studies in Statistics, University of Mysore, 05-07 March, 2012.
5. Two day workshop on “SPSS” organized by the department of Psychology, PrajyotiNiketan College, Thrissur during 02-03 November 2012.
6. Three day Workshop on “Statistical Analysis of Time Series data with Applications” at Cochin University of Science and Technology during 14-16 January 2013.

7. "Census Data Dissemination" organized by the Directorate of Census Operations, Kerala on 23 March 2013.
8. Three day International Workshop on "Reliability Theory and Survival Analysis at Cochin University of Science and Technology during 31 December 2013 to 02 January 2014.
9. Three day Workshop on "Qualitative Data and Analysis Methods" conducted by the department of Bio-Statistics, Amrita Institute of Medical Sciences, Kochi during 21-23 August 2014.
10. Two day Workshop on "Clinical Research and Grantsmanship" at Government Medical College, Thrissur, 23-24 October 2014 conducted by Indo-US Emergency Medicine.

**Cultural Workshops Attended:**

1. Natyacharutha, Bharathanatyam workshop, 26-27 April 2013, conducted by Kalabharathi Foundation for Indian Culture and Heritage.
2. Two day State Short Story Camp conducted by Souhrdam Cultural Society in July 2013.
3. Two day State Poetry Camp conducted by Souhrdam Cultural Society in July 2014

**Seminars Attended**

1. National Seminar on Recent Trends in Statistics and Related Areas, Dept of Statistics, University of Calicut, March 15-17, 2012.
2. National Seminar on Scope and Applications of Statistics at Sree Kerala Varma College, Thrissur on 18-10-2013.
3. International Seminar on Statistical Research at St. Thomas College, Thrissur, 10<sup>th</sup> and 11<sup>th</sup>, June 2013.
4. International Conference on Statistics, Probability and Related Areas, December 19-22, 2011 at CUSAT, Kerala.
5. International Conference on Stochastic Modelling, Dept. of Statistics, St. Thomas College, Pala, Kerala, 3-4 January 2014.
6. Organised and attended 2 day national conference on 'Interdisciplinary Realms of Statistics' in connection with Kerala Statistical Association, at Sree Kerala Varma College, Thrissur, 9, 10<sup>th</sup> January 2015.
7. Regional Seminar on Couple Therapy at Jubilee Mission Hospital Thrissur, 19<sup>th</sup> February 2015

- (a) International Seminars : 3  
(b) National + Regional Seminars : 16

**Training/ Refresher Courses attended:**

Attended three Refresher Courses in Statistics.

- (a) 03-11-1994 to 26-11-1994 at CUSAT, Cochin.  
(b) 26-02-1997 to 18-03-1997 at CUSAT, Cochin.  
(c) 12-02-2004 to 05-03-2004 at Government Victoria College, Palakkad

**Experience as Research Guide (with details):**

**Recognized Research Guide of**

1. University of Calicut, Calicut (No. CDC/ B1/ 1651/ 2003 dated 14/ 05/ 2004)
2. M. G. University, Kottayam (No. 3571/ Ac. AVI/ 1/ RG/ 2009/ Acad. dated 14<sup>th</sup> August 2009).

**The teacher's research output during the last 10 years.**

- a. **No of M.Phil./PhD dissertations supervised and submitted:** M.Pil-1  
b. **No of M.Phil./Ph.D. Awarded under the teacher's supervision.** M.Phil. -1 Ph.D-3

(a) Ph.D. produced Three (Two in Calicut University and one in M.G. University)

1. Dr. Sherly Sebastian, Associate Professor in Statistics, Vimala College, Thrissur. (Calicut University)
2. Dr. K E Rajasekharan, Department of Statistics, University of Calicut. (Calicut University)
3. Dr. Prasanth C.B., Department of Statistics, St. Thomas College, Pala (M.G. University)

At present 2 students have registered in M. G. University under her supervision for Ph.D. and are pursuing their research

**Research Project carried out (with details)**

nil

**Awards/ Recognitions received from various agencies.**

**Research award of UGC/ CSIR/ Other agencies :**

- (i) CSIR Junior Research Fellowship during 1988 – 1989, Department of Statistics at the University of Kerala.

(ii) CSIR Senior Research Fellowship during 1990 – 1991, in the Department of Statistics at the University of Kerala.

(iii) Research Associateship of the CSIR for 10 months during 1993 in the Department of Mathematics and Statistics at CUSAT, Cochin

Awards/ Recognitions received from various agencies.

(a) University level : **Rank holder** for B.Sc. (1<sup>st</sup>), M.Sc. (3<sup>rd</sup>) and M.Phil (1<sup>st</sup>).

: **Prof. M M Ghani Award** for the best college teacher under University of Calicut in 2011.

(b) National : **The Young Scientist Award** of the Indian Science Congress Association at their Session in Cochin – 1990.

(c) International: Included in **Marquis Who's Who** in the World 2010.

#### **Other Awards**

A **Guinness World Records Certificate holder** for performing in a Mohiniyattom dance in which the most number of people performed at the Jawaharlal Nehru Stadium in Cochin on 28 November 2006.

A short story titled **PuzhaParanjathu** won the first prize in the short story competition held by *puzha.com*, a leading e-magazine in Malayalam in 2008.

A short story titled **PatikalKayarunnaPenkutti** was adjudged for the second prize in the ThakazhiCherukathaPuraskaaram 2009, a short story competition held by Sahitheeyam, Thakazhi.

A poem titled **Avalosupoti** won the second prize in Rashtrakavi Govinda Pai Smaraka Thulunatu Kavitha Award, 2010.

A collection of short stories, titled **PatikalKayarunna Penkutti**, was published by H & C Publishers, Thrissur.

Publishes poems and stories in Malayalam periodicals-Bhashaposhini, Madhyamam, Kalakoumudi, Keralakoumudi, Pachakkuthira, Samayam, Akam, Janasakthi, etc.

Was an invited artist at St. Joseph's College, Irinjalakkuda, Thrissur for their Women's Cell program "Invisible but Invincible" in September 2012.

Souhramdam cultural society award for the story titled "***jeevikkan manangal athyanthaapekshithamaano?***"

Kamala Suraiyya Short Story Award in 2014 for the short story titled "***jeevikkanmanangalathyanthaapekshithamaano?***"

M S Surendran Foundation Award in 2014 for the short story titled "***Heathcliff***".

Her short story titled "***Chenkata***" was selected as one of the best three short stories in the short story competition in memory of T V Kochubava, in 2014. The same story received consolation prize of vanitha sahithi ,Thrissur in 2015.

*Sargolsavam* endowment 2014 instituted by Warriar Samajam.

**Extension work/ community service (give short account of contributions in programs of national integration and involvement in NSS/ NCC, sports and games, cultural activities, national literacy mission, environment protection/ NGO.**

Had been the Program Officer, National Service Scheme, for two years at Prajyoti Niketan College, Pudukkad, during 2003 – 2005.

**Membership/ official position in academic, socio-cultural, voluntary organizations etc. details**

1. Life member of both the Indian Society for Probability and Statistics (ISPS) and the Kerala Statistical Association (KSA).
2. Member of Board of Studies in Statistics (UG), University of Calicut during 2008-2010.
3. Former Vice-president of Kerala Statistical Association.
4. Reviewer for Mathematical Reviews of American Mathematical Society, USA
5. Had been the Program Officer, National Service Scheme, for two years at Prajyoti Niketan College, Pudukkad, during 2003 – 2005.
6. Was in charge of Music club in college for two years.
7. Was in charge of Debating club in college for three years.
8. Was in charge of University and College examinations.
  1. (d) In charge of Writers forum in college.
9. In charge of Dancers club in college.

10. Staff Editor of College Magazine

**Has been a referee to**

1. The Journal of the Indian Statistical Association, Pune
2. Statistical Papers, Dortmund, Germany
3. Applied Mathematical Letters, USA.
4. Statistical Editor, Indian Journal of Dermatology

**Efficiency as organizer, details of programs hosted.**

1. Organized a two-day literary camp at college in March 2010 for college students in Thrissur district.
2. Was Secretary of ATOSS (Alumni Association, Department of Statistics, Sree Kerala Varma College) during 1995 to 2002.
3. Organized seminars at Sree Kerala Varma College under the auspices of ATOSS.
4. Organized one-hour cultural program on music and dance during UGC-NAAC visit in college in October 2010 in which more than 70 students participated.
5. Organized music quizzes in college.
6. Organized debates in various subjects of social issues.

**Contribution of the teacher to the general welfare and growth of the institution.**

Organizes and actively participates in each and every program that leads to the general welfare and growth of the institution and students welfare

**Any other information relevant to the context**

nil

**Papers Presented**

**Papers Presented during 2010-2014**

1. A note on the infinite divisibility of discrete distributions having ALM property, National Conference on Statistics for 21<sup>st</sup> Century 10-12, December 2012. At Dept of Statistics, University of Kerala.
2. Applications of Harris Distribution, National Seminar on Interdisciplinary Applications in Statistics, 25-26, November 2010. At Dept of Statistics, Maharajas College, Ernakulam, Kerala.
3. A Generalization of the Marshall–Olkin Parametrization Scheme, National Conference on Statistics for 21<sup>st</sup> Century 17-19, March 2011. At Dept of Statistics, University of Kerala.



4. Bernstein Processes ,National Seminar on Statistical Theory and Applications, 15-16 March, 2013  
at St.Thomas College, Pala, Kerala.

