

Bio-Sketch



Tirthankar Ghosh, PhD

Present Position:

(Since 15 May 2008)

Assistant Professor (Stage-III),

Department of Statistics,
Siksha Bhavana (Institute of Science)
Visva-Bharati (A Central University)
Santiniketan, WB-731235, India

Positions previously held:

Research Associate (Oct, 2013- May, 2017),

Department of EOAS
Florida State University,
Tallahassee, Florida-32306-4520, USA
and

Assistant Professor (April 2005-May2008),
Department of Statistics, Midnapore College,
Midnapore, WB-721101, India

Research interest includes reliability & probability distribution theory, time series analysis, data analytics, visual analytics, and applications of statistics in weather and climate. Works have been published in many journals of national and international repute. *IEEE Transactions on Reliability, Communications in Statistics (Theory & Methods), Ecological Indicators, Weather and Forecasting, Ecological Indicators, Advances in Meteorology, Reviews of Geophysics, International Journal of Hydrology, International Journal of Quality and Reliability Management, Calcutta Statistical Association Bulletin* etc. are few journals to name where works have been published.

Interests lie in conducting online courses, pedagogy in ICT era and management of online learning etc.

Coding and or work experience includes the environments (Windows, Linux) & softwares like SPSS, MINITAB, R, Python, PSPP, FORTRAN & Shell-scripting.

Expertise in deploying, maintaining, and using learning management system Moodle. Experienced in deploying and maintaining applications in cloud platforms (AWS, GPC).

Academic distinctions: 1st in 1st Class in M.Sc. (Statistics) Exam 2003, University of Kalyani. Qualified GATE in 2003; NET (JRF) in Mathematical Sciences, 2003 (June).

SB Dasgupta Endowment award from University of Kalyani, West Bengal,
Post-doc Research Fellowship from Florida State University, Tallahassee,
Florida-32306-4520, USA (2013-2017)

Curriculum Vitae

Tirthankar Ghosh, PhD



Current position and Contact Details:

Assistant Professor (Since 15 May 2008)
Department of Statistics,
Siksha Bhavana (Institute of Science)
Visva-Bharati (A Central University)
Santiniketan, West Bengal, India.
PIN-731235.
e-mail: tirthankar.ghosh@visva-bharati.ac.in

Positions previously held:

Postdoctoral Associate Researcher

(Oct 2013 - June 2015 and Aug 2016 - May 2017)
Dept. of Earth, Ocean & Atmospheric Sc.
Florida State University
Tallahassee, Florida-32306-4520, USA

Assistant Professor

Dept. of Statistics
Midnapore College
Midnapore, WB-731235, India
(April 2005 – May 2008)

EDUCATION:

B.Sc. (Honours) Statistics: **2001**, University of Kalyani, Kalyani, WB-741235, India

M.Sc. in Statistics: **2003**, University of Kalyani, Kalyani, WB-741235, India

Ph.D. (Statistics): **2012**, University of Kalyani, Kalyani, WB-741235, India

Awards

** Visiting Research Associate in the Department of Earth, Ocean and Atmospheric Science, Florida State University, Tallahassee, Florida, 32306-4520 during Oct 2013 to June 2015 and Aug 2016 to May 2017.

□□ **Junior Research fellowship** on the basis of UGC-CSIR National Eligibility Test (NET) in Mathematical Sciences in June, 2003.

- Qualified Graduate Aptitude Test in Engineering (GATE) in 2003. All India Rank 214, Subject-Engineering Sciences.

- S.B. Dasgupta Memorial Endowment Award for Standing **First in First Class** in M.Sc (Statistics) Examination, 2003 at University of Kalyani, Kalyani, India.
- Scholarship from University at B.Sc (Honours) level.

COMPUTER SKILLS

1. Programming in FORTRAN, R, Shell scripting, Python.
2. Software: SPSS, MINITAB, PSPP
3. Word Processing: MS-Word, Latex, Tex, LYX
4. Platform: Windows, Linux
5. Experienced in deploying and maintaining applications in cloud platforms (AWS, GPC).
6. Expertise in deploying, maintaining, and using learning management system Moodle.

RESEARCH INTERESTS:-

- Time Series Analysis
- Data Analysis, Text Analytics
- Reliability Engineering
- Applications of Statistics in Weather & Climate Research
- Educational Technologies

□□ **Courses Taught (UG & PG):** Descriptive Statistics, Mathematical Probability, Time series analysis, Economic Statistics, Sample Survey, Multivariate Analysis, Reliability Theory, Statistical Inference, Linear Models, Descriptive Statistics, R, Python.

Date of Birth: 15.02.1979

LIST of Publications:

PUBLISHED/ACCEPTED IN JOURNALS

1. Roy Dilip, & Ghosh Tirthankar: “A new discretization approach with application in reliability estimation”, *IEEE Transactions on Reliability*, Vol. 58, pp: 456-461, (2009). IEEE, **Impact Factor = 1.288**, ISSN-0018-9529.
2. Ghosh Tirthankar & Roy Dilip: “Statistical tolerancing through discretization of variables”, *International Journal of Quality and Reliability Management (IJQRM)*, Vol. 28, No. 2, pp.220 – 232, (2011), ISSN-0265-671X
3. Ghosh Tirthankar, Roy Dilip and Chandra Nimai Kumar: “Discretization of random variables with Applications”, *Calcutta Statistical Association Bulletin*, Vol. 63, Nos. 249-252, pp.323-337, (2011), CSA, ISSN-0008-0683

4. Roy Nayan, Laskar Rajibul Arif, Sk Ismail, Kumari Deepa, **Ghosh Tirthankar** and Begum Naznin Ara: “A detailed study on the antioxidant activity of the stem bark of *Dalbergia sissoo Roxb.* an Indian medicinal plant”, *Food Chemistry*, Vol 126, pp: 1115-1121. (Elsevier) (2011), **Impact Factor: 3.655**
5. Chandra Nimai Kumar, Roy Dilip & **Ghosh Tirthankar**: “A Generalized Poisson distribution”, *Communications in Statistics (Theory & Methods)*, 42, pp: 2786-2797. DOI: 10.1080/03610926.2011.620207, **Impact Factor=0.27**, 2013, Taylor Francis, ISSN-0361-0926 (Print), 1532-415X (Online)
6. **Ghosh Tirthankar**, Roy Dilip and Nimai Kumar Chandra: “Reliability approximation through the discretization of random variables using Reversed Hazard Rate Function”, *International Journal of Mathematical Science and Engineering*, World Academy of Science Engineering and Technology, Vol. 7, No. 4, pp: 909-913, 2013. ISSN- 1307-6892.
7. T.N. Krishnamurti, V. Kumar, A. Simon, A. Bharadwaj, **T. Ghosh** and R. Ross: A review of multimodel superensemble forecasting for weather, seasonal climate, and hurricanes, *Reviews of Geophysics*, Vol54, pp:336-377, 2016, **Impact Factor = 12.34**
8. Krishnamurti, T.N, Dipak K Sahu, Vinay Kumar, Ruby Krishnamurti, Ghosh, T., Anu Simon, Thomas, A., Sarvesh Dubey, (2017), Extreme orographic rains from streams of moist marine layer wind systems with a possible geoengineering application, *International Journal of Hydrology*, 1, 229-242.
9. Kumar Vinay and **Ghosh Tirthankar**: Performance of Multimodel Schemes for Seasonal Precipitation over Indian Region, *Advances in Meteorology*, vol. 2018, Article ID 5874270, 14 pages, 2018. doi:10.1155/2018/5874270, **Impact Factor = 1.277**
10. **Ghosh Tirthankar** and T.N. Krishnamurti: Improvements in hurricane intensity forecasts from a multi-model superensemble utilizing a generalized neural network technique, *Weather and Forecasting*, Vol. 33, pp: 873-885, 2018, **Impact Factor: 2.23**, American Meteorological Society, ISSN: 0882-8156; eISSN: 1520-0434.
11. Karmakar Dipti, **Ghosh Tirthankar** & Padhy Pratap: “Effects of air pollution on carbon sequestration potential in two different tropical forests of West Bengal, India”, *Ecological Indicators*, Vol. 98, pp: 377-388, 2019, **Impact Factor: 4.22**, Elsevier, ISSN: 1470-160X.
12. Nimai Sahani and **Ghosh Tirthankar**: GIS-based spatial prediction of recreational trail susceptibility in protected area of Sikkim Himalaya using logistic regression, decision tree and random forest model, *Ecological Informatics*, (Accepted), 2021, **Impact Factor=2.51**, Elsevier, ISSN: 1574-9541.

PAPERS IN CONFERENCES

- 13. Ghosh Tirthankar** and Roy Dilip, “A characterization of the exponential distribution based residual life consideration”, *National Seminar on Statistics and its Applications*”, 19-20 January 2007, Department of Mathematics, Sant Longowal Institute of Engineering & Technology, Longowal, Punjab, India.

- 14. Ghosh Tirthankar** and Roy Dilip, “Discretization of random variables and reliability estimation”, *International conference on Achieving excellence in Business Organizations: Issues and Challenges*, 29-31 January 2009, Center for Management Studies, The University of Burdwan, Burdwan, India.

- 15. Ghosh Tirthankar**, Roy Dilip and Chandra Nimai Kumar: “Discretization of random variables with applications”, *Seventh International Triennial Calcutta Symposium on Probability and Statistics*, 28-31 December 2009, Department of Statistics, University Calcutta, Kolkata, India.

- 16. Ghosh Tirthankar**, Dilip Roy and Chandra Nimai Kumar: ‘Application of Discretization of Random Variables in Engineering Design by Reliability’, in *XXXI Annual Convention of Indian Society of Probability and Statistics (ISPS) and International Conference on Statistics, Probability and Related Areas* December 19-22, 2011, held at Cochin University of Science and Technology, Kerala, India.

- 17. Ghosh Tirthankar**: ‘Application of Statistics in Engineering Design’ in the *National Conference on “Applications of Statistics in Life Science and Engineering”* December 09-10, 2011, held at EES, PSB, Visva-Bharati, WB, India.

- 18. Ghosh Tirthankar**: ‘Application of Reversed Hazard Rate Function in reliability approximation’, in the 6th International Conference of Institute for Mathematics, Bioinformatics, Information Technology and Computer Science (IMBIC), December 21-23, 2012, held at Kolkata, India.

- 19. Ghosh Tirthankar**: ‘A Comparative study of discretizing methods for approximating system reliabilities’, in *Young Statisticians’ Meet-An International Conference*, December 24-25, 2012, held at Department of Statistics, The University of Burdwan, India.

- 20. Ghosh Tirthankar**: ‘A Comparative study on reliability approximations of complex mechanical items’, in *Symposium on Recent Trends and Emerging Applications of Mathematical Sciences*, during 16-17 May 2013, held at Department of Mathematics, National Institute of Technology Rourkela, Odisha.

21. **Ghosh Tirthankar** and Krishnamurti T.N.: Status of Research on Multimodel Superensemble Forecast for Hurricane Intensity, in Annual Meeting of Hurricane Forecast Improvement Project of NOAA, USA held in Miami, USA during 18-20 November 2014.
22. **Ghosh Tirthankar and Krishnamurti T.N.:** Improvement of Hurricane Forecasts using the Multimodel Superensemble and a suite of Mesoscale Models: Review, Hurricane Forecast Improvement Project Round2 awards review meeting held at RSMAS, University of Miami, Miami, Florida, USA, 11-12 June 2015.
23. **Ghosh Tirthankar:** A study on usefulness of neural networks for time series modeling, *National Seminar on Recent Advances in Statistical Tools for Agriculture and Allied Sciences*, Organized by SASAA, BCKV and ISSER Kolkata during 3-5 March 2016.
24. **Ghosh Tirthankar:** A comparative study on time series forecasting through statistical and artificial neural network techniques, *Two Day National Seminar on Probability and Statistics*, organized by Dept. of Statistics, West Bengal State University, Barasat, WB, India during 28-29 March 2016
25. **Ghosh Tirthankar** and Krishnamurti T.N: Improvement in hurricane intensity forecast using neural network, *HFIP Annual Conference*, National Hurricane Center, Miami, FL, USA, Jan11-12, 2017.
26. **Ghosh Tirthankar:** *An analysis of Indian rural health sector facilities with reference to available human resources*, National Seminar on Approaches Towards Sustainable Development organized by AK Dasgupta Centre for Planning and Development, Visva-Bharati, Santiniketan on January 28, 2019.
27. **Ghosh Tirthankar:** Statistical Tools in Data Science: Some Applications, WB-OHEPEE National Seminar on Statistical Methodology & and Data Science held at the PG Department of Statistics, Utkal University during March 15-16, 2019.

INVITED LECTURES

1. July 12, 2016: Delivered an invited lecture on Descriptive Statistics using R for Ph D Course Work on Statistics using R at Department of Statistics, West Bengal State University, Barasat, W.B.
2. AK Dasgupta Center for Development and Planning, National Workshop on Research Methodology Course in Social sciences, June 16-25, 2018: *Two lectures on Understanding SPSS & Applications*.
3. AK Dasgupta Center for Development and Planning, National Workshop on Research Methodology Course in Social sciences, June 26-July 05, 2018: *Two lectures on Understanding SPSS & Application*.

4. AK Dasgupta Center for Development and Planning, National Workshop on Understanding SPSS & its Application, Sep04-08, 2018: *Two lectures on Basic Statistical Analysis Using SPSS and Non-parametric Analysis using SPSS.*
5. AK Dasgupta Center for Development and Planning, National Workshop on Understanding SPSS & its Application, Nov20-24, 2018: *Two lectures on Basic Statistical Analysis Using SPSS and Non-parametric Analysis using SPSS.*
6. June 20 & 23, 2018: Delivered two invited lectures in National Workshop on Research Methodology Course in Social Sciences held at AK Dasgupta Centre for Planning and Development (A Centre sponsored by the Niti Aayog, Govt. of India), Visva-Bharati, Santiniketan, W.B. during June 16-25, 2018.
7. June 27 & 28, 2018: Delivered two invited lectures in National Workshop on Research Methodology Course in Social Sciences held at AK Dasgupta Centre for Planning and Development (A Centre sponsored by the Niti Aayog, Govt. of India), Visva-Bharati, Santiniketan, W.B. during June26-July 05, 2018.
8. Sep. 04 & 05, 2018: Delivered two invited lectures in National Workshop on Understanding SPSS & its Application in Research held at AK Dasgupta Centre for Planning and Development (A Centre sponsored by the Niti Aayog, Govt. of India), Visva-Bharati, Santiniketan, W.B. during Sep. 04-08, 2018.
9. Nov. 20 & 21, 2018: Delivered two invited lectures in National Workshop on Understanding SPSS & its Application in Research held at AK Dasgupta Centre for Planning and Development (A Centre sponsored by the Niti Aayog, Govt. of India), Visva-Bharati, Santiniketan, W.B. during November 20-24, 2018.
10. Feb. 07, 2019: Delivered one invited lecture in National Workshop on Planning & Development of Online Courses with Reference to MOOCs held at AK Dasgupta Centre for Planning and Development (A Centre sponsored by the Niti Aayog, Govt. of India), Visva-Bharati, Santiniketan, W.B. during Feb. 05-11, 2019.
11. Delivered invited Lecture at the inaugural session of a certificate course (RUSA sponsored) on "Instrumentation and Data Analysis" held on 28.04.2019 at Midnapore College (Autonomous), Medinipur, West Bengal.
12. Acted as invited speaker in Two Days National Workshop on Quantitative Techniques in Social Sciences by Software held during May 10-11, 2019, at Sarajini Naidu College for Women, Kolkata.
13. Delivered an invited lecture on Aug 06, 2019, in the National Workshop on Research Methodology Workshop in Social Sciences held at AK Dasgupta Centre for Planning and Development (A Centre sponsored by the Niti Aayog, Govt. of India), Visva-Bharati, Santiniketan, W.B.
14. Delivered lecture as resource person in the seminar ICT-Enabled Education at Mahadevananda Mahavidyalaya, Barrackpore, West Bengal on September 11, 2019.

15. Delivered an invited lecture on September 23, 2019, in the National Workshop on Application of R in Research & Development held at AK Dasgupta Centre for Planning and Development (A Centre sponsored by the Niti Aayog, Govt. of India), Visva-Bharati, Santiniketan, W.B.
16. Delivered invited Lectures (two) at the E-Workshop on "Statistical Modelling through R" on 23rd, 25th, and 27th June 2020 organized by Prasanta Chandra Mahalanobis Mahavidyalaya, Banhoogly, West Bengal.
17. Acted as resource person and delivered two lectures in the One-Week National e-workshop on 'Using Open-source Learning Management System for online teaching' during 17-25 Aug 2020 at Central Library, Visva-Bharati, Santiniketan, WB.
18. Acted as resource person and delivered a lecture in a webinar on 'Statistical Analysis using R for Media and Communication Research' held on 29th August 2020 organized by Media Watch (A Scopus indexed journal).
19. Delivered an invited lecture and conducted hands-on session, on "Moodle based LMS" for teachers of Midnapore College, Midnapore, WB on 05 September 2020 via online platform.
20. Delivered an invited lecture on "Conducting Online Test" in the 7-day National Workshop on Planning & Development of Massive Open Online Courses [MOOCs] on 15 December 2020 via online mode, organized by AK Dasgupta Centre for Planning and Development (A Centre sponsored by the Niti Aayog, Govt. of India), Visva-Bharati, Santiniketan, W.B.

COURSES PARTICIPATED FOR PROFESSIONAL DEVELOPMENT

1. 68th Orientation programme (for College & University teachers) held at Academic Staff College, The University of Burdwan, Burdwan, India, 13 December 2008-09 January 2009. (This programme was sponsored by the University Grants Commission, India)
2. 2nd Refresher Course in Information Communication Technology (ICT) (MD) held at Academic Staff College, The University of Burdwan, Burdwan, India, 4-24, March 2011. (This programme was sponsored by the University Grants Commission, India)
3. Refresher Course in Statistics held at Department of Statistics, University of Calcutta, Kolkata, India, 2-21 July 2012. (This programme was sponsored by the University Grants Commission, through ASC, CU).
4. Participated in SERB Summer School on 'Weather and Climate in Tropics' at IIT Delhi held during 3-26 June 2013 sponsored by DST Govt. of India.
5. Participated in Short term course on Medical Data Analytics at IIT Kharagpur, held during 7-11 September 2017, sponsored by AICTE.

6. Participated in the UGC Sponsored Workshop on MOOCs, E-Content Development & Open Educational Resources held at UGC-Human Resource Development Centre, The University of Burdwan, during October 30-November 05, 2018.

SEMINAR WORKSHOP ORGANIZED/CONDUCTED

1. National Workshop on Planning & Development of Online Courses with Reference to MOOCs held at AK Dasgupta Centre for Planning and Development (A Centre sponsored by the Niti Aayog, Govt. of India), Visva-Bharati, Santiniketan, W.B. during Feb. 05-11, 2019. (Acted as Coordinator)
2. One-Week National e-workshop on 'Using Open-source Learning Management System for online teaching' during 17-25 Aug 2020 at Central Library, Visva-Bharati, Santiniketan, WB. (Organizing Asst. Secretary and Co-Host)

Number of Research Scholars presently working with: 03 (Three)

MEMBERSHIPS OF PROFESSIONAL BODIES

1. Life Member, Indian Statistical Institute Council, Kolkata,
2. Calcutta Statistical Association, Kolkata,
3. Indian Society of Statistics, Computer and Applications, New Delhi.

REVIEWER

International Journal of Quality and Reliability Management, Emerald.
Microelectronics Reliability, Elsevier.
Quarterly Journal of Royal Meteorological Society (QJRMS)
Bulletin of Calcutta Statistical Association
Journal of Applied Statistics

CO-CURRICULAR ACTIVITIES

Served as Hostel Warden from November 2008 to May 2013. Member of several departmental boards and committees.