CV of Md Hasinur Rahaman Khan, PhD

Contact Information

Professor
Applied Statistics
Institute of Statistical Research and Training (I.S.R.T.), University of Dhaka, Dhaka 1000 Bangladesh

Room: 209 (1st Floor)
Tel.: +88 (0)1725106661
Fax: +88 (2) 8615583
E-mail: hasinur@isrt.ac.bd
Web: www.isrt.ac.bd/people/hasinur

Current Employment

January 30, 2022 to — now: *Professor*
Applied Statistics, ISRT, University of Dhaka, Bangladesh

January 26, 2016 to — January 29, 2022: *Associate Professor*
Applied Statistics, ISRT, University of Dhaka, Bangladesh

February 07, 2013 — January 25, 2016: *Assistant Professor*
Applied Statistics, ISRT, University of Dhaka, Bangladesh

May 24, 2005 — February 06, 2013: *Lecturer*
Applied Statistics, ISRT, University of Dhaka, Bangladesh

Education

Ph.D in Statistics (June, 2013), Department of Statistics, University of Warwick, UK.

M.Sc. in Statistics with distinction (2008), Department of Statistics, University of Warwick, UK

M.Sc. in Applied Statistics (2001), I.S.R.T, University of Dhaka, Bangladesh

B.Sc. in Applied Statistics (1999), I.S.R.T, University of Dhaka, Bangladesh

Award

2020: *Dhaka University Science Faculty Dean's Honour Award 2020*, University of Dhaka, Bangladesh (announced in 2023; yet to receive)

2016: *International Society for Clinical Biostatistics Conference Awards for Scientists 2016*, ISCB2016 conference held in Birmingham, United Kingdom, August 2016

2016: *Dhaka University Science Faculty Dean's Honour Award 2015*, University of Dhaka, Bangladesh

2015: *International Society for Clinical Biostatistics Conference Awards for Scientists 2015*, ISCB2015 conference held in Utrecht, Netherlands, August 2015

2014: *Dhaka University Science Faculty Dean's Honour Award 2013*, University of Dhaka, Bangladesh

Grants and Research Projects

Secured

2022-23: University Grants Commission (UGC) Bangladesh research grant for a project titled "Vulnerability to Poverty in Bangladesh, UGC of Bangladesh" as principle investigator.

2021-22: Research Prooject sponsored by DASIB (Data Analytics Solution in Bangladesh) (with 15 public and private university faculty members) titled "Impact of The Covid-19 Pan-

demic on Student's University Education in Bangladesh" as principal investigator.

2021-22: Dhaka University internal grant (with Prof. Tamanna Howlader) for a project titled "The impact of food insecurity on health status, suicidal ideation and quality of life among adults living in poverty: A study in urban slums of Bangladesh" as principle investigator.

2019-20: Sultan Qaboos University (Oman) internal grant (with PI Dr. Faisal Ababneh) for a project titled "Factors Influencing Road Accidents in Oman: Evidence from National Survey Data, SQU, Oman" as co-investigator.

2017-18: Ministry of Science and Technology research grant for a project (with P.K. Roy) entitled "Change-point and Spatial Analysis of Environmental Variables in Bangladesh" as principle investigator.

2017-18: University Grants Commission (UGC) Bangladesh research grant for a project (with Tahmina Akter) entitled "Trends and Determinants of Chronic Non-communicable Diseases in Bangladesh" as principle investigator.

2017-18: University Grants Commission (UGC) Bangladesh research grant for a project entitled "Mapping Poverty and Inequality in Bangladesh" as principle investigator.

2017-18: Sultan Qaboos University (Oman) internal grant (with PI Dr. Faisal Ababneh) for a project titled "Determinants of Diabetes Mellitus in Oman" as co-investigator.

2016-17: Sultan Qaboos University (Oman) internal grant (with PI Dr. Faisal Ababneh) for a project titled "Non-communicable Diseases and Their Mapping in Oman" as co-investigator.

2016-17: Sultan Qaboos University (Oman) internal grant (with PI Dr. M. Mazharul Islam) for a project entitled "Literacy and Literate Life Expectancy in Oman" as co-investigator.

2015-16: University Grants Commission (UGC) Bangladesh research grant for a project entitled "Change–point Analysis of Earthquake Data in Bangladesh" as principle investigator.

2014-15: Bangladesh Bureau of Statistics research grant (with ISRT team) for a project entitled "Population Projection of Bangladesh: Dynamics and Trends" as co-investigator.

2013-14: University Grants Commission (UGC) Bangladesh research grant for a project entitled "Detail Gander and Spatial Scenario of Literate Life Expectancy at Birth in Bangladesh" as principle investigator.

2013-14: University Grants Commission (UGC) Bangladesh research grant (with Dr. M Shafiqur Rahman) for a project entitled "Disease Mapping in Bangladesh" as co-investigator .

Research Interests

I work in high–dimensional data analysis (Censored or Uncensored), with his main research interest being in variable selection or variable reduction techniques and also in statistical inference with censored data found in the fields like survival analysis, bioinformatics, biostatistics, epidemiology, demography etc. I am interested to work in the fields–statistical machine learning, statistical computing, public health, Bayesian statistics, and Social sciences, data sciences. I am also interested in statistical consultancy which includes general advice on the application of statistical methods including sample size calculation, study design, data analysis and interpretation, and on all statistical aspects of development, business and academic research.

Consultancy Experience I have consultancy work experiences since 2010 with many national and international organizations including Bangladesh Bureau of Statistics, Asian Development Bank, Office for National Statistics in UK, Bangladesh Satelite Company Limited, NSU Global Health Institute, International Centre for Environmental Management (ICEM), Associates for Community and Population Research (ACPR), Asian Development Bank, Unicef, Bangladesh Bureaue of Statistics.

Publications

Articles (selected peer reviewed):

1. M. Mohsin, S. Mahmud, A. U. Mian, P. Hasan, A. Muyeed, M. T. Ali, F. F. Ahmed, A. Islam, M. M. Rahman, M. Islam, M. H. R. Khan, and M. S. Rahman (2022). Side effects of COVID-19 vaccines and perceptions about COVID-19 and its vaccines in Bangladesh: A Cross-sectional study, *Vaccine: X*, Volume 12, 100207, doi: 10.1016/j.jvacx.2022.100207

2. M.H.R. Khan and M. Akhter (2022). Ranking Based Variable Selection for Censored Data Using AFT Models. *Communications in Statistics - Simulation and Computation*, doi: 10.1080/03610918.2022.2092639.

3. S. Mahmud, M. Mohsin, F. Sumona and M.H.R. Khan (2021). Redefining Homogeneous Climate Regions in Bangladesh Using Multivariate Clustering Approaches. *Natural Hazards*, 111, 1863–1884 doi: 10.1007/s11069-021-05120-x.

4. A. Mimi and M.H.R. Khan (2021). Variable Selection for Censored Data Using Modified Correlation Adjusted coRrelation (MCAR) Scores. *Statistics in Medicine*. 1-19 doi: 10.1002/sim.9110.

5. M.H.B. Siam, M.M. Hasan, S.M. Tashrif, M.H.R. Khan, E. Raheem, and M.S. Hossain (2021). Insights into the first seven months of COVID-19 pandemic in Bangladesh: Lessons learned from a high-risk country. *Heliyon*. doi: 10.1016/j.heliyon.2021.e07385.

6. Z.Z. Sultana, F.U. Hoque, J. Beyene, M.A. Islam, M.H.R. Khan, S. Ahmed, D.H. Hawlader and A. Hossain (2021). HIV Infection and Multidrug Resistant Tuberculosis: A Systematic Review and Meta-analysis. *BMC Infectious Diseases*, 21:51. doi: 10.1186/s12879-020-05749-2.

7. M.H.R. Khan and A. Hossain (2020). Machine Learning Approaches Reveal that Number of Tests does not Matter to Predict Global COVID-19 Confirmed Cases. *Frontiers in Artificial Intelligence*, 3:561801. doi: 10.3389/frai.2020.561801.

8. M. Ali, G.U. Ahsan, R. Khan, M.H.R. Khan and A. Hossain (2020). Immediate impact of stay-at-home orders to control COVID-19 transmission on mental well-being in Bangladeshi adult population:Patterns, Explanations, and future directions. *BMC Research Notes*, Volume 13, Article number 494.

9. M. S. Al-Balushi, M. S. Ahmed, M. M. Islam and M. H. R. Khan (2020). Multilevel poisson regression modeling to identify factors influencing the number of children ever born to married women in Oman, *Journal of Statistics and Management Systems*, doi:10.1080/09720510.2019.1709328.

10. M.H.R. Khan, A. Bhadra and T. Howlader (2019). Stability selection for lasso, ridge and elastic net implemented with AFT models. *Statistical Applications in Genetics and Molecular Biology*, 18(5), 20170001.

11. M.B. Hossain, S.K. Mistry, M. Mohsin and M.H.R. Khan (2019). Trends and determinants of perinatal mortality in Bangladesh. *PLoS ONE*, 14(8): e0221503.

12. M.M. Islam, M.H.R. Khan and T. Hawlader (2019). Modified Profile Likelihood Estimation for the Weibull Regression Models in Survival Analysis. *Communications in Statistics Theory and Methods*, 48(9): 2329-2343 (doi: 10.1080/03610926.2018.1472784).

13. P. K. Roy, M. H. R. Khan, T. Akter and M. S. Rahman (2019). Exploring socio-demographic-and geographical-variations in prevalence of diabetes and hypertension in Bangladesh: Bayesian spatial analysis of national health survey data. *Spatial and Spatio-temporal Epidemiology*, 29: 71-83.

14. M. H. R. Khan, and J.E.H. Shaw (2019). Variable Selection for Accelerated Lifetime Models with Synthesized Estimation Techniques. *Statistical Methods in Medical Research*, 28(3): 937-952.

15. M. H. R. Khan (2018). On The Performance of Adaptive Pre-processing Technique in Analysing High-dimensional Censored Data. *Biometrical Journal*, 60(4): 687-702 (doi: 10.1002/bimj.201600256).

16. M.B. Hossain and M.H.R. Khan (2018). Role of Parental Education on Reduction of Prevalence of Childhood Undernutrition in Bangladesh. *Public Health Nutrition*, 21(10): 1845-1854 (doi: 10.1017/S1368980018000162).

17. M.B. Hossain, M.H.R. Khan, F. Ababneh and J.E.H. Shaw (2018). Identifying Factors Influencing Contraceptive Use in Bangladesh: Evidence from BDHS 2014 Data, *BMC Public Health*, 18:192 (doi: 10.1186/s12889-018-5098-1, published online).

18. M.M. Islam, F. Ababneh, and M. H. R. Khan, (2018). Consanguineous Marriage in Jordan: An Update. *Journal of Biosocial Science*, 50(4): 573-578.

19. M. H. R. Khan, and T.T. Islam (2017). Optimal Portfolio Determination for Developing Country's Vulnerable Stock Market Data. *Journal of Statistics & Management Systems*. 20(3): 337-354.

20. M. H. R. Khan, and J. E. H. Shaw (2016). On dealing with censored largest observations under weighted least squares. *Journal of Statistical Computation and Simulation*, Vol. 86(18): 3758–3776.

21. M. H. R. Khan, A. M. Azharul Islam, and Faisal Ababneh (2016). Substantial Gender Gap Reduction in Bangladesh Explained by the Proximity Measure of Literacy and Life Expectancy. *Journal of Applied Statistics*, Vol. 43(13): 2377–2395.

22. M. H. R. Khan, and J. E. H. Shaw (2016). Variable Selection for Survival Data with A Class of Adaptive Elastic Net Techniques. *Statistics and Computing*, Vol. 26(3): 725–741.

23. M. H. R. Khan, and J. E. H. Shaw (2016). Robust Bias Estimation for Kaplan−Meier Survival Estimator with Jackknifing. *Journal of Statistical Theory and Practice*, Vol. 10(1): 7-19.

Articles (other peer reviewed):

24. R. Jahan T. Howlader, M. I. Alam, A. Hossain and M.H.R. Khan (2021). On sample size calculation in testing treatment efficacy in clinical trials, *Biometrical Letters*, Vol. 58(2): 133-147.

25. M.H.R. Khan (2021). COVID-19 Pandemic Situations and Predictions in Bangladesh, Journal of Bangladesh Studies (Special Issue on COVID-19). Vol. 23(1): 19-30.

26. M.H.R. Khan, and T. Howlader (2020). Breaking the Back of COVID-19: Is Bangladesh Doing Enough Testing?. *Journal of Biomedical Analytics*, Vol. 3(2): 25-35.

27. M.M. Islam, F. Ababneh, T. Akter, and M.H.R. Khan (2020). Prevalence and risk factors for low birth weight in Jordan and its association with under-five mortality: a population-based analysis. *Estern Mediterranean Health Journal*, WHO, 26(10): 1273-1284, doi:10.26719/emhj.20.096.

28. M.M. Islam, and M.H.R. Khan (2019). Literate Life Expectancy and Gender Differentials in Oman. *Journal of Reliability and Statistical Studies*, Vol. 12(2): 21-31.

29. N. J. Akter, and M. H. R. Khan (2018). Effect of Sample Size on the Profile Likelihood Estimates for Two-stage Hierarchical Linear Models. *Journal of Biomedical Analytics*, Vol. 1(2): 81-89.

30. M. H. R. Khan and T. N. Smriti (2018) Efficiency Analysis of Manufacturing Firms Using Data Envelopment Analysis. *Journal of Data Science*. Vol. 18(1): 69-78.

31. M. M. Islam and M. H. R. Khan (2016). Incidence of and Risk Factors for Small Size Babies in Bangladesh. *International Journal of Community & Family Medicine*, Vol. 123(1): 2–7.

32. M. H. R. Khan, S. Afrin and M.S. Masud (2016). Mortality Forecasting Using Lee Carter Model Implemented to French Mortality Data. *Dhaka University Journal of Science*, Vol. 64(2): 99–104.

33. Moza Al-balushi, S. Ahmed, M Mazharul Islam, and M. H. R. Khan (2016). Contraceptive Method Choices among Women in Oman: A Multilevel Analysis. *Journal of Data Science*, Vol. 14(1): 117–132.

34. M. H. R. Khan (2015). Efficiency of Weibull Regression Model over Cox Regression Model: A Simulation Study. *JP Journal of Biostatistics*, Vol. 12(2): 169–178.

35. M. H. R. Khan, T. Ahmed, and F. Ababneh (2015). Factors Causing Deaths Due to Injury among Children in Bangladesh. *Journal of Mathematics and Statistics*, Vol. 11(2): 39-44.

36. M. S. Al-Balushi, M. S. Ahmed, M. M. Islam and M. H. R. Khan (2015). Determinants of Contraceptive Use in Oman. *Far East Journal of Theoretical Statistics*, Vol. 50, Issue 1.

37. M. H. R. Khan, and J. E. H. Shaw (2013). Variable Selection with The Modified Buckley–James Method and The Dantzig Selector for High–dimensional Survival Data. *Proceedings 59th ISI World Statistics Congress, 25-30 August 2013, Hong Kong, p. 4239-4244*.

38. H. Nargis and M.H.R. Khan (2013). Portfolio Risk Management with Financial Statistics Applied to Stock Market Data. *Journal of Information Technology and Business Management*, Vol. 10(1): 49-55.

39. M.H.R. Khan and J.E.H. Shaw (2011). Multilevel Logistic Regression Analysis Applied to Binary Contraceptive Prevalence Data. *Journal of Data Science*, Vol. 9(1): 93-110.

40. M.H.R. Khan and J.E.H. Shaw (2009). Determinants of Contraceptive Use in Bangladesh: A Hierarchical Modeling Approach. *The International Journal of Interdisciplinary Social Sciences*, Vol. 4(4): 103-118.

41. M.H.R. Khan and R. Sultana (2009). Bayes Estimator Leads to Classical Estimators under Some Conditions of Prior Distribution for Exponential Distribution: A Simulation Study. *Journal of Statistics and Applications*, Vol. 4(4): 509-520.

42. M. Asaduzzaman and M.H.R. Khan (2009). Identifying Potential Factors of Childbearing in Bangladesh, *Asian Social Science*, Vol. 5(3): 147-154.

43. M.H.R. Khan (2008). Comparative Study of Exponential Regression Model and Cox Regression Model with Simulated Data. *Dhaka University Journal of Science*, Vol. 56(2): 211-214.

44. M.H.R. Khan and M. Asaduzzaman (2007). Literate Life Expectancy in Bangladesh: A New Approach of Social Indicator. *Journal of Data Science*, Vol. 5(1): 131-142.

45. M.H.R. Khan, Hussain S., Rahman M. M. and Khan S. A. (2003). Remedial Measures for Violation of Linearity Assumption between Logit and Continuous Covariate: An Application to BDHS Child Mortality Data. *Dhaka University Journal of Science*, Vol. 52(1): 47-54.

Book:

46. M.H.R. Khan (2010). Multilevel Logistic Regression Analysis of Contraceptive Binary Data: Basics, Applications, Interpretations. *VDM Verlag Dr. Müller*, Germany.

R Packages Published:

47. R package `imputeYn` (2012) published in CRAN (http://cran.r-project.org/web/packages/imputeYn/index.html).

48. R package `jackknifeKME` (2013) published in CRAN (http://cran.r-project.org/web/packages/jackknifeKME/index.html).

49. R package `AdapEnetClass` (2013) published in CRAN (http://cran.r-project.org/web/packages/AdapEnetClass/index.html).

50. R package `MPLikelihoodWB` (2016) published in CRAN (http://cran.r-project.org/web/packages/MPLikelihoodWB/index.html).

51. R package `DNAseqtest` (2016) published in CRAN (http://cran.r-project.org/web/packages/DNAseqtest/index.html).

52. R package `mapReasy` (2017) published in CRAN (http://cran.r-project.org/web/packages/mapReasy/index.html).

Pre-print/Working Papers (selected):

53. With Yesar Ahmed Oshan, Begum Zainab, Dipankar Bandyopadhyay. Factors Influencing The First and Second Peak of COVID-19 Global Cases: A Survival Analysis. Published in medRxiv as preprint on September 16, 2021. Doi: 10.1101/2021.09.13.21263497.

54. With Md. Hasanul Banna Siam, Md Mahbub Hasan, Enayetur Raheem, Mahbubul H Siddiqee, Mohammad Sorowar Hossain. Insights into the first wave of the COVID-19 pandemic in Bangladesh: Lessons learned from a high-risk country. Published in medRxiv as preprint on August 6, 2020. Doi: 10.1101/2020.08.05.20168674.

55. With Ahmed Hossain, Mohammad Ali, Gias Ahsan. (May 2020). Mental wellbeing in the Bangladeshi healthy population during nationwide lockdown over COVID-19: an online cross-sectional survey. Published in medRxiv as preprint on May 18, 2020. Doi: 10.1101/2020.05.14.20102210.

56. With Tamanna Howlader (May 2020). Visualizing the COVID-19 pandemic in Bangladesh using coxcombs: A tribute to Florence Nightingale.
Preprint (medRxiv), doi:10.1101/2020.05.23.20110866.

57. With Tamanna Howlader (May 2020). Breaking the back of COVID-19: Is Bangladesh doing enough testing? Preprint (medRxiv), doi:10.1101/2020.05.09.20096123.

58. With Tamanna Howlader and Md Mazharul Islam (May 2020) Battling the COVID-19 Pandemic: Is Bangladesh Prepared? Preprint (medRxiv), doi:10.1101/2020.04.29.20084236.

59. With Ahmed Hossain (April, 2020), Countries are Clustered but Number of Tests is not Vital to Predict Global COVID-19 Confirmed Cases: A Machine Learning Approach. Preprint (medRxiv), doi: 10.1101/2020.04.24.20078238.

60. With Ahmed Hossain (April, 2020), COVID-19 Outbreak Situations in Bangladesh: An Empirical Analysis. Preprint (medRxiv), doi: 10.1101/2020.04.16.20068312.

61. With Shaila Sharmin (September, 2017). Analysis of Unobserved Heterogeneity via Accelerated Failure Time Models Under Bayesian and Classical Approaches. Preprint (arXiv:2001391).

62. With Anamika Bhadra and Tamanna Howlader (April, 2016). Stability Selection for Lasso, Ridge and Elastic Net Implemented with AFT Models. Preprint (arXiv:1604.07311).

63. With Md. Mazharul Islam (March, 2016). Improved Likelihood Estimation for the Generalized Extreme Value and the Inverse Gaussian Lifetime Distributions. Preprint (arXiv:1603.08388).

Daily Report on Covid-19 Status in Bangladesh:
I have published 963 Daily Report on Covid-19 Status in Bangladesh by myself. The report was prepared daily based on the Covid-19 cumulative data. The reports are published at https://sites.google.com/view/khanteaching/corona/daily-report.

Articles published in Daily Newspaper:
I have published 22 article write-up on various issues including public health, demography at https://sites.google.com/view/khanteaching/corona/articles-pre-print-and-newspaper.

Selected conferences /talks

1. "Bayesian Variable Selection Methods for Parametric AFT Models in High Dimensions", "32nd Research Students' Conference in Probability and Statistics 2009", March 23-26, Lancaster University, UK. [Talk]

2. "The Sensitivity of Priors in Bayesian Variable Selection for Parametric AFT Models in High Dimensions", "30th Annual Conference of the International Society for Clinical Biostatistics (ISCB) 2009", August 23-27, University of Economics, Prague, Czech Republic. [Talk]

3. "Penalized Weighted Least Squares Variable Selection Method for AFT Models with High Dimensional Covariates", "33rd Research Students' Conference in Probability and Statistics 2010", April 12-15, University of Warwick, UK. [Talk]

4. "The Bayesian Elastic Net and Related Methods" presented in "Model Uncertainty Workshop 2010", May 30- June 1, University of Warwick, UK. [Poster]

5. "Bayesian and Non-Bayesian Variable Selection for Parametric AFT Models in High Dimensions" presented in "9th Valencia International Meeting on Bayesian Statistics 2010", June 03-08, Benidorm, Spain. [Poster]

6. "Penalized regression approaches to variable selection for AFT models in high dimensions" presented in "31st Annual Conference of the International Society for Clinical Biostatistics 2010, 29 August-02 September, Montpellier, France. [Poster]

7. "Variable Selection Technique for AFT Models with Regularized Weighted Least Squares" presented in "Young Researchers Meetings, December 16, 2010, Statistics Department, University of Warwick, UK. [Talk]

8. "On Some Aspects of Weighting under Right Censoring" presented in "34th Research Students Conference in Probability and Statistics 2011, April 04-07, University of Cambridge, UK. [Talk]

9. "Variable Selection with The Modified Buckley–James Method and The Dantzig Selector for High-dimensional Survival Data". presented in Young Researchers Meetings, June 19, 2012, Statistics Department, University of Warwick, UK. [Talk]

10. "Robust Bias Estimation for Kaplan–Meier Survival Estimator with Jackknifing" presented in "Bose Conference", February 4, 2013, University of Dhaka, Bangladesh. [Talk]

11. "Variable Selection with The Modified Buckley–James Method and The Dantzig Selector for High-dimensional Survival Data" presented in 59-th ISI World Statistics Congress, August 25-30, 2013, Hong Kong, China. ISI-World bank fund granted [Invited Talk]

12. "Variable Selection with The Modified Buckley–James Method and The Dantzig Selector for High-dimensional Survival Data" presented in 59-th ISI World Statistics Congress, November 20, 2014, Department of Statistics and Mathematics, Sultan Qaboos University, Oman. [Invited Talk]

13. "Literate Life Expectancy: A Proximity Measure of Literacy and Life Expectancy", International Workshop on "Statistics and Society", April 3-6, 2015, Sponsored by ISI and organized by Sarder Patel University, Anand, Gujarat, India. World bank fund granted. [Invited Talk]

14. "Stability Selection for Lasso, Ridge and Elastic Net Implemented with AFT Models" presented in International Society for Clinical Biostatistics Conference 2015 (ISCB2015), 23-27 August, Utrecht, the Netherlands. ISCB Scientist award winner [Invited Talk]

15. "On The Performance of Adaptive Pre-processing Technique in Analysing High-dimensional Censored Data" presented in International Society for Clinical Biostatistics Conference 2016 (ISCB2016), 21-25 August, Birmingham, UK. ISCB Scientist award winner [Invited Talk]

16. "Incidence and Risk Factors for Small Size at Birth in Bangladesh" presented in ISI sponsored Quantitative Methods for Public Health Researchers of the SAARC Countries Workshop, December 28-30, 2016, Calcutta University, India. World bank fund granted. [Poster]

17. "Sample Effects on Large Sample Estimation Methods for Parametric Lifetime Models" presented in International Society for Clinical Biostatistics Conference 2017 (ISCB2017), 9-13 July, 2017, Vigo, Spain. [Poster]

18. "Ranking Based Variable Selection for Censored Data Using AFT Models" presented in International Society for Clinical Biostatistics Conference 2017 (ISCB2017), 9-13 July, 2017, Vigo, Spain. World bank developing country's fund granted. [Poster]

19. "Variable Selection for AFT Models Using Generalized Linear Mixed Modeling Approach" (winner of the IBS travel grant) presented in International Biometric Conference (IBC) 2018, July 8-13, Bercelona, Spain. [Talk]

20. "Desire for Children Still Norm in Bangladesh: Evidences from National Surveys Using Machine Learning Techniques" presented in 2018 International Symposium on Big Data and Applied Statistics (ISBDAS2018), November 2-4, 2018, Guangzhou, China. [Keynote Talk]

21. "Ranking Based Variable Selection for Censored Data Using AFT Models" (winner of the WBTF conference fund) presented in ISI World Statistics Congress 2019, August 18 –23, 2019, Kuala Lumpur, Malaysia. [Poster]

22. "Change-point and Spatio-temporal Analysis of Climate Data in Bangladesh" (winner of the WBTF conference fund) presented in The International Environmental Statistics Conference, August 26-27, 2019, Kunming, China. [Talk]

23. "Iterative Least-squares Regression with Censored Data: A Survival Ensemble of Learning Machine" (winner of the travel grant) presented at the 2020 Meeting of the International Society for Data Science and Analytics (ISDSA), May 26 to 27, 2020 at the University of Notre Dame, Notre Dame, IN 46556, USA. [Invited Talk]

24. "Statistical and Machine Learning Approaches for Survival Analysis", in The International Symposium on Advanced Statistical Data Analysis and Operational Research (iADORE2020), December 7-8, 2020, (virtually hosted by UTM (Malaysia), ISRT (Bangladesh) and UNAND (Indonesia). [Keynote Talk]

25. "Artificial Intelligence, Machine Learning, and Big Data: what do we know and expect?", in The BCSIR Congress-2022, December 1-3, 2022, Dhaka, Bangladesh. [Keynote Talk]

Electronic & Print Media Involvement

Newspaper and Television:
My opinion write-up on Public Health, Statistics, Demography and particularly Covid-19 disease has been published regularly in several national top class Newspapers e.g., Daily Prothom-Alo, Bonikbarta, Samakal, Jagonews24.bd. Opinion on Covid-19 has been regularly broadcasted on different top level TV channels e.g., Ekattor TV, Channel24, ATN News, Somoy, Independent24, Doctor's TV etc.

Editorial Experience & Journal Refereeing (selected)

Editor:
Editor: Journal of Biomedical Analytics
Associate Editor: PLOS One.
Associate Editor: Zagazig University Medical Journal.
Statistical editorial team member: Chest journal.

Reviewer for Journals:
Biometrics, Statistics in Medicine, Lifetime Data Analysis, Journal of Applied Statistics, Communications in Statistics-Theory and Methods, Journal of Statistical Theory and Practice, Chest, PLOS ONE, BMC Bioinformatics, BMJ Open, BMC Public Health, BMC Research Notes, BMC Medical Research Methodology, Statistical Applications in Genetics and Molecular Biology, Computers in Biology and Medicine, IEEE Access, Journal of Sustainable Finance & Investment, International Journal for Equity in Health, Asian Population Studies, Journal of Data Science, International Journal of Interdisciplinary Social Sciences, Journal of Statistical Research, Asian Journal of Scientific Research, Pakistan Journal of Nutrition.
Book:
Weisz, George. (2014). Chronic Disease in the Twentieth Century: A History. John Hopkins University Press.

Computing Skill

Programming/Statistical Packages/Software

R (Excellent), Python (moderated), SPSS (Excellent), Stata (moderated), MLwiN

Six R packages are development and publication in CRAN (`http://cran.r-project.org/web/packages/`):
2012: `imputeYn`– for imputing the last largest censored observation(s) under weighted least squares
2013: `jackknifeKME`– for computing both the original and modified jackknife estimates of Kaplan–Meier estimators
2013: `AdapEnetClass`– for modeling high-dimensional censored data using a class of

adaptive elastic-net methods
2016: `MPLikelihoodWB`– for computing modified profile likelihood estimates for Weibull shape and regression parameters
2016: `DNAseqtest`– for generating and testing DNA sequences
2017: `mapReasy`– for producing administrative boundary map with additional features embedded

Applications

LaTeX, TeX, BibTeX, Microsoft Office
Web Development: web designing and maintaining

Research Supervision

Masters Thesis Supervision

21 Masters thesis works at ISRT, University of Dhaka

2 Masters thesis works currently running at ISRT, University of Dhaka

2 Ph.D thesis works supervising currently at ISRT, University of Dhaka

2 Ph.D thesis works (foreign university in India and Spain) examined

BS and MS Project Supervision

11 Masters and 12 BS project works in ISRT, University of Dhaka

0 BS project works currently running in ISRT, University of Dhaka

Research Supervision Detail

Applied Statistics, I.S.R.T., University of Dhaka, Bangladesh

Thesis (Masters, Applied Statistics)

2005-06: Degree and Determinants of Men's Contraceptive Knowledge in Bangladesh: A Multinomial Logistic Regression Approach to the 1999 and 2004 BDHS Contraceptive Data. By Dewan Sonia Sultana.
2013-14: Greedy Variable Selection Techniques Applied to Censored Data. By Togor.
2013-14: Stability Selection for Lasso, Ridge and Elastic Net Implemented to AFT Models. By Anamika Bhadra.
2014-15: Modified Profile Likelihood Estimation and Inference Techniques Applied to Survival Models. By Md. Mazharul Islam.
2015-16: A Comparison Between Rate Mixture Weibull and Mixed PH Model when Unobserved Heterogeneity is Incorporated. By Shaila Sharmin.
2015-16: Performances of Variable Selection Techniques with AFT Models based on Weighted Least Squares. By Tagdira Naznin Smriti.
2016-17: Ranking Based Variable Selection for Censored Data Using AFT Models. By Marzan Akhter.
2016-17: Variable Selection for AFT Models: A Generalized Linear Mixed Model Approach. By Sifat Sharfin.
2017-18: Variable Selection for Censored Data Using Modified CAR Scores. By Afsana Mimi. (**Winner of the 2018 ISCB Conference Scientist Award**).
2017-18: Age at First Birth and Birth Spacing: A Joint Modelling Approach for Longitudinal and Survival Data. By Tanzina Haque.
2017-18: Bayesian Estimation of Deaths and Damages in Major Cyclones, Famine and Floods in Bangladesh. By Mahmuda Jahan.
2018-19: Variable Selection for Censored Data with Adaptive Quantile Regression Models. By Md Nasim Saba Nishat (**Winner of the 2019 ISCB Conference Fund for Developing Countries (CFDC)**).
2018-19: Predictive Performance of the Logistic Regression Model under Separation Problem and Minimal EPV. By Kazy Farhat Tabassum (**Winner of the 2019 ISCB Conference Fund for Developing Countries (CFDC)**).

2019-20: Iterative Least-squares Regression with Censored Data: A Survival Ensemble of Learning Machine. By Nayma Hossain (**Winner of the 2020 ISCB Conference Scientist Award**).
2019-20: Cure Rate Accelerated Failure Time Model with Spatial Frailty. By Faiaz Rumman Khan.
2020-21: Analysis of Clustered Survival Data with Dependent Censoring. By Afsana Dil Afroze (**Winner of the 2022 ISCB Conference Fund for Developing Countries (CFDC)**).
2020-21: Implimentation of Lightgbm and XGBoost to Survival Data under AFT Model. By Md. Saifur Rahman Mazumder (**Winner of the 2022 ISCB Conference Scientist Award**).
2020-21: Disagreement Based Variable Selection Method for High-dimensional Censored Data. By Suborna Sultana (**Winner of the 2022 ISCB Conference Scientist Award**)
2021-22: Detection of Multiple Change Points in Survival Analysis with Narrowest Significant Pursuit Technique. By Samia Ashrafi (**Winner of the 2023 ISCB Conference Scientist Award**)
2021-22: Implementation of Gradient Boosting for Survival Analysis with Competing Risk. By Nofel Ahmed (**Winner of the 2023 ISCB Conference Scientist Award**)

Teaching Experience

Applied Statistics, I.S.R.T., University of Dhaka, Bangladesh

Linear Algebra and Algebra (BSc 1st Year: 2005, 2006)

Sampling Distributions and Statistical Inference (BSc 2nd Year: 2005, 2006)

Statistical Inference-I (BSc 2nd Year: 2007)

Operations Research (BSc 3rd Year: 2005)

Statistical Inference (BSc 4th Year: 2005, 2006, 2007)

Statistical Multivariate Techniques (BSc 4th Year: 2007partial)

Advanced Survival Analysis (MSc: 2005, 2006)

Applied Statistics and SPSS training short course (2005, 2006, 2007, 2012–)

Applied Statistics and Stata training short course (2005, 2006, 2007, 2012–)

R for Data Analytics training short course (2018, 2019–)

Probability Distributions and Simulation (BS 2nd Year: 2013, 2014partial)

Lifetime Data Analysis (BS 4th Year: 2013, 2014, 2015 2016)

Statistical Computing IX (BS 4th Year: 2016, 2017)

Statistical Computing I (MS : 2019–)

Comprehensive Statistical Computing (Master: 2014, 2015)

Applied Bayesian Statistics (Master: 2016, 2017)

Generalized Linear Models (BS 4th Year: 2017, 2018, 2019–)

Statistical Machine Learning (Master: 2017-2018, 2019, 2020, 2021, 2022–)

Institutional and Professional Activity

Trustee Board Member (2023–), Institute of Statistical Research and Training Alumni Association (ISRTAA), University of Dhaka, Bangladesh

President (founding) (2018– January 2023), Institute of Statistical Research and Training Alumni Association (ISRTAA), University of Dhaka, Bangladesh

President (Ad-hoc) (2013-2017), Applied Statistics Alumni Association (ASAA), University of Dhaka, Bangladesh

Member, Institutional Review Board (IRB), Bangladesh Biomedical Foundation, Bangladesh

Life member, Bangladesh Statistical Association (BSA)

Member, International Statistical Institute (ISI)

Member, International Biometry Society (IBS)

Member, International Society for Clinical Biostatistics (ISCB)

Extra Curriculum Activity

Web administrator of Microsoft's Conference Management Toolkit, designer and maintainer for *International Conference on Applied Statistics 2019* web site, to be held in 27–29 December, 2019

Student advisor (January 2013–January 2016), Applied Statistics, ISRT, University of Dhaka

Web administrator of Microsoft's Conference Management Toolkit, designer and maintainer for *International Conference on Applied Statistics 2014* organized by ISRT, University of Dhaka, Bangladesh, December 27–29, 2014

Web administrator, designer and maintainer for *First ever ISRT Reunion* web site; held in July 2014 and organized by ISRT, University of Dhaka, Bangladesh

Maintainer and web administrator for current ISRT's web site (since 2017), University of Dhaka, Bangladesh