Sajid Ali

CONTACT INFORMATION	Department of Statistics, Quaid-i-Azam University Islamabad, 45320, Pakistan.	sajidali@qau.edu.pk sajidali.qau@hotmail.com 00925190642185 (Office) 00923016869239 (Mobile)

RESEARCH INTERESTS
Stochastic Processes, Statistical Process Monitoring and Control, Bayesian Statistics, Reliability Analysis, Mixture Models, Functional Data Analysis, Survival Analysis with focus on sample size determination, Time Series Data Analysis, and Applied Statistics

ORCID ID
0000-0003-4868-7932

SCOPUS AUTHOR ID
56794894400
7403093400

WEB OF SCIENCE RESEARCHERID
M-7117-2018

RESEARCHGATE
https://www.researchgate.net/profile/Sajid_Ali17

GOOGLE SCHOLAR
https://scholar.google.com/citations?hl=en&user=YdO1l7wAAAAJ&view_op=list_wor

EDUCATION
Bocconi University, Milan, Italy
Ranking: 17th (Source: 2017 QS World University Ranking)

Ph.D., Statistics, (2011-2015)   Awarded January 2016

- Thesis Topic: *Stochastic Models for High Quality Process Monitoring*
- Advisor: Prof. Antonio Pievatolo (Ph.D), CNR-IMATI, via Bassini 15, 20133 Milan, Italy.
- Co-Advisor: Prof. Sonia Petrone (Ph.D), Department of Decision Sciences, Via Roentgen 1, Milan 20136, Italy.
- External Examiners:
  Prof. Piero Veronese (Ph.D), Department of Decision Sciences, Bocconi University, Milan, Italy.
  Prof. Paola Bortot (Ph.D), Department of Statistics, University of Bologna, Bologna, Italy.
  Prof. Maria Maddalena Barbieri (Ph.D), Department of Economics, University of Rome III, Rome, Italy.
- Internal Examiner: Prof. Bianca Maria Colosimo (Ph.D), Department of Mechanical Engineering, Polytechnic Milan, Italy.

Quaid-I-Azam University, Islamabad, Pakistan,

M.Phil., Statistics, 2010 (1st Div. (4.1/5 CGPA)/82%)

- Topic: *Statistical Inference for the Simple and Mixture of Laplace Distribution via Bayesian Approach*
- Advisor: Dr. Muhammad Aslam, Professor and Former Chairman, Department of Statistics, Quaid-I-Azam University, Islamabad 45320, Pakistan.(Current

Affiliation: Professor and Incharge-Statistics Discipline, Department of Mathematics and Statistics, Faculty of Engineering and Applied Sciences, Riphah International University, Islamabad, Pakistan.)

M.Sc., Statistics, 2008, 1st Div. /78.13%

University of Sargodha, Sargodha, Pakistan

B.Sc., Mathematics and Statistics, 2006, 1st Div. /73.87%

PROFESSIONAL EXPERIENCE	**Associate Professor-QAU**	February 2022–To date
	Assistant Professor-QAU	August 2017–February 2022
	Assistant Professor-UMT	Sep 2016–July 2017

COURSES TAUGHT

Graduate/Undergraduate Courses at QAU

Biostatistics	BS Statistics-Spring 24
Basic Statistics Inference	BS Statistics-Spring 24
Recent Development in Statistics	MPhil & PhD Statistics-Fall 22
Statistical Methods	BS Statistics-Fall 23
Survival Analysis	BS Statistics-Summer 23
Research Methodology	BS Statistics-Fall 22
Computational Statistics	MPhil & PhD Statistics-Spring 22
Statistical Inference-II (Hypotheses Testing)	BS Statistics-Fall 20, Summer 23
Statistical Inference-I (Estimation)	BS Statistics-Spring 20
Statistical Quality Control and Quality Management	MSc & BS Statistics-Spring 18,19,21
Probability & Probability Distributions-I	MSc & BS Statistics-Spring 18,19, Fall 21,22
Nonparametric Statistics and Categorical Data	MSc Statistics-Fall 19
Probability & Probability Distributions-II	MSc Statistics-Fall 2018, BS Statistics-Spring 21,23
Advanced Probability Theory	MPhil & PhD Statistics-Fall 19,20
Statistical Process Control	MPhil & PhD Statistics-Fall 17,18, Spring 20,23
Bayesian Inference	MPhil & PhD Statistics-Spring 21
Statistical Design and Analysis of Clinical Trials	MPhil & PhD Statistics-Fall 21
Nonparametric Statistics	BS Statistics-Fall 2017
Reliability Theory	BS Statistics-Spring 2019
Survival Analysis	MSc Statistics-Spring 2019

Reading Courses at QAU

Biostatistics	BS Statistics-Fall 20
Statistical Quality Control and Quality Management	BS Statistics-Fall 17, Fall 18, Spring-21

Summer Courses at QAU

Statistical Packages	BS Statistics-21
Biostatistics	BS Statistics-19
Population Analysis	BS Statistics-19

Graduate Courses at UMT

Bayesian Statistics	PhD Statistics-Spring 2017
Statistical Analysis using R-Language	MS Applied Statistics-Spring 2017
Advance Topic in Time Series Analysis	PhD Statistics-Fall 2016

	Categorical Data Analysis	MS Applied Statistics-Fall 2016

Undergraduate Courses at UMT

	Biostatistics-II	BS-Spring 2017
	Biostatistics-I	BS-Fall 2016
	Business Mathematics	BS-Fall 2016

COURSES
DEVELOPED

Revised BS, MPhil& PhD Statistics Syllabus in 2019

BS Courses

Exploratory Data Analysis and Visualization
Reliability Theory and Repairable Systems
Generalized Linear Model
Introduction to Actuarial Statistics
Introduction to Statistical Learning
Environmental Statistics
Introduction to Epidemiology
Introduction to Statistical Genetics
Introduction to Demography
Introduction to Financial Statistics
Qualitative Research Methods

MPhil & PhD Courses

Financial Econometrics
Statistical Design and Analysis of Clinical Trials
Reliability Theory
Computational Statistics
Social Network Analysis Advanced Survival Analysis
Statistical Ecology
Epidemiology
High-Dimensional Data Analysis and Management

RESEARCH
EXPERIENCE

Post Doc.   Jan 2016 to Aug 2016

Department of Decision Sciences,
Bocconi University, Milan

Researcher with Grant   Sep 2015 to Jan 2016

Department of Decision Sciences,
Bocconi University, Milan

Research Assistant   Sep 2013 to Aug 2015

Department of Decision Sciences,
Bocconi University, Milan, Italy.

Research Assistant   Sept 2009 to Aug 2010

Quaid-I-Azam University,
Islamabad, Pakistan.

REFEREED
JOURNAL
(IMPACT
FACTOR)
PUBLICATIONS

97. **Ali, S.**, (2024), Memory-type Time-Between-Events Charts using Nonhomogeneous Poisson Process, *Communication in Statistics-Simulation and Computation*, (), -. DOI:10.1080/03610918.2024.2401443.

96. Abbas, A., **Ali, S.**, and Shah, I., (2024), Exponentially Weighted Moving Average Chart using Zero-Inflated Negative Binomial Distribution,

Journal of Statistical Computation and Simulation, (), . DOI: 10.1080/00949655.2024.2385014.

95. Shah, I., Ejaz, Z., **Ali, S.**, Aldallal, R., and Kilai, M. (2022), Modeling the Determinants of Out of School Children in Pakistan, *Complexity*, 2022, Article ID , 10 pages. DOI: .

94. Talib, A., **Ali, S.**, Shah, I., and Gul, F. (2022), Max-EWMA Chart for Time and Magnitude Monitoring using Weibull based Max-EWMA Chart, *Communication in Statistics-Simulation and Computation*, (), -. DOI: 10.1080/03610918.2022.2145310.

93. Bibi, B., **Ali, S.**, and Shah, I., (2022), Robustness of shape parameter for Erlang and Weibull Bayesian acceptance sampling plans, *Scientia Iranica*, (), -. DOI: 10.24200/SCI.2022.56796.4914.

92. Shah, I., Iqbal, B., Akram, M. F., **Ali, S.**, and Dey, S., (2021), Unit Nadarajah and Haghighi distribution: Properties and applications in quality control, *Scientia Iranica*, (), -. DOI: 10.24200/SCI.2021.57302.5167.

91. **Ali, S.**, Waheed, M., Shah, I., and Raza, S.M.M., (2024), Bayesian Sample Size Determination for Coefficient of Variation of Normal Distribution, *Journal of Applied Statistics*, 51(7), 1271-1286. DOI: 10.1080/02664763.2023.2197571.

90. Uzair, M., Shah, I., and **Ali, S.**, (2024), An adaptive strategy for wind speed forecasting under functional data horizon: A way towards enhancing clean energy, *IEEE Access*, 12, 68730-68746. DOI: 10.1109/ACCESS.2024.3401038.

89. Shah, I., Mubassir, P., **Ali, S.**, and Albalawi, O., (2024). A functional autoregressive approach for modeling and forecasting short-term air temperature, *Frontiers in Environmental Science*, 12, 1411237. DOI: 10.3389/fenvs.2024.1411237

88. Shah, I., Gul, N., **Ali, S.**, and Houmani, H., (2024). Short-term hourly ozone concentration forecasting using functional data approach, *Econometrics*, 12(2), 12. DOI: 10.3390/econometrics12020012

87. Talib, A., **Ali, S.**, Shah, I., (2024), An Efficient MEWMA Chart for Gumbel's Bivariate Pareto Distribution, *Journal of Taibah University for Science*, 18(1), 2338949 DOI: 10.1080/16583655.2024.2338949.

86. Abbas, T., Tahir, M., Abid, M., Munir, S., and **Ali, S.**, (2024), The 3-Component Mixture of Power Distributions under Bayesian Paradigm with Application of Life Span of Fatigue Fracture, *Scientific Reports*, 14, Article ID 8074. DOI: 10.1038/s41598-024-58245-x.

85. Talib, A., **Ali, S.**, and Shah, I., (2024), Max-EWMA Chart for Time and Magnitude Monitoring using Generalized Exponential Distribution, *Communication in Statistics-Simulation and Computation*, 53(4), 1857-1872. DOI:10.1080/03610918.2022.2058548.

84. Akbar, M. H., **Ali, S.**, Shah, I., Alqifari, H. N., (2024), Sample size determination for time-to-event endpoints in randomized selection trials with generalized exponential distribution, *Heliyon*, 10(5), e27013. DOI: 10.1016/j.heliyon.2024.e27013.

83. **Ali, S.**, Asghar, M., and Shah, I., (2024), Generalized linear model based gamma control chart, *Quality and Reliability Engineering International*, 40(1), 699-711. DOI: 10.1002/qre.3437.

82. Ibrar, F., **Ali, S.**, and Shah, I., (2024), A Comparison of Single and Double Threshold ROC Plots for Mixture Distributions, *Journal of Applied Statistics*, 51(2), 256-278. DOI: 10.1080/02664763.2022.2122027.

81. Qureshi, M., **Ali, S.**, and Shah, I. (2023), Joint Monitoring using Information Theoretic Control Charts, *Statistica*, 83(1), 41-80. DOI:10.6092/issn.1973-2201/16505.

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79. Yousaf, F., **Ali, S.**, Shah, I., and Riaz, S., (2023) Parameter estimation of the exponentiated Chen distribution based on upper record values, *Journal of Reliability and Statistical Studies*, 16(1), 197-228. DOI: 10.13052/jrss0974-8024.16110

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76. **Ali, S.**, Shamim, R., Shah, I., Alrweili, H., and Marcon, G., (2023), Memory-type Control Charts Charts for Censored Reliability Data, *Quality and Reliability Engineering International*, 39(6), 2365-2384. DOI: 10.1002/qre.3347.

75. Shah, I., Naz, H., **Ali, S.**, Almohaimeed, A., and Lone, S. A., (2023). A new quantile based approach for the LASSO estimation, *Mathematics*, 11(6), 1452. DOI: 10.3390/math11061452

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73. Nawaz, H., Shah, I., and **Ali, S.**, (2023), The Amygdala connectivity with depression and suicide ideation with suicide behavior: A meta-analysis of structural MRI, resting-state fMRI and task fMRI, *Progress in Neuropsychopharmacology & Biological Psychiatry*, 124, 110736. DOI: 10.1016/j.pnpbp.2023.110736.

72. Shah, I., Muhammad, I., **Ali, S.**, Ahmed, S., Almazah, M. M. A., and Al-Rezami, A. Y., (2022). Forecasting day-ahead traffic flow using functional time series approach, *Mathematics*, 10(22), 4279. DOI: 10.3390/math10224279

71. Dey, S., Nassar, M., **Ali, S.**, Kumar, D., and Raheem, E. (2022), Comparison of Estimation Methods of Power Generalized Weibull Distribution, *Statistica*, 82 (4), 339-372. DOI: 10.6092/issn.1973-2201/12924.

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69. **Ali, S.**, Ara, J., and Shah, I., (2022), A comparison of different parameter estimation methods for exponentially modified Gaussian distribution, *Afrika Matematika*, 33, 58, DOI: 10.1007/s13370-022-00995-w. (HEC Recognized-Y category HJRS)

68. Nabeel, M., **Ali, S.**, and Shah, I. (2022), Proportional Hazard based Robust Monitoring Schemes using Logistic Distribution, *Quality and Reliability Engineering International*, 38(7), 3304-3321. DOI:10.1002/qre.3118.

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65. Taimoor, M., **Ali, S.**, Shah, I., Muwanika, F. R.(2022), Covid-19 Pandemic Data Modeling in Pakistan using Time Series SIR, *Computational and Mathematical Methods in Medicine*, 2022, Article ID 6001876, 1-14. DOI: 10.1155/2022/6001876.

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60. Akram, M. F., **Ali, S.**, Shah, I., and Marcon, G., (2022), Unit interval time and magnitude monitoring using beta and unit gamma distributions, *Journal of Mathematics*, 2022, Article ID 7951748, 1-17. DOI: 10.1155/2022/7951748.

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54. **Ali, S.**, Ahmed, N., Shah, I., Lone, S. A., and Alsubie, A., (2021), Absolute Deviation based Control Charts for Monitoring Mean of Weibull Distribution with Type-I Censoring, *IEEE Access*, 9, 107519-107547. DOI: 10.1109/ACCESS.2021.3100845.

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52. Eliwa, M.S., El-Morshedy, M., and **Ali, S.**, (2021), Exponentiated Odd Chen-G Family of Distributions: Statistical Properties, Bayesian and Non-Bayesian Estimation with Applications, *Journal of Applied Statistics*, 48(11), 1948-1974. DOI: 10.1080/02664763.2020.1783520.

51. Aslam, M., Yousaf, R., and **Ali, S.**, (2021), Two-Component Mixture of Transmuted Fréchet Distribution: Bayesian estimation and application in Reliability, *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences*, 91 (2), 309-336. DOI:10.1007/s40010-020-00701-0.

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49. Nabeel, M., **Ali, S.**, and Shah, I. (2021), Robust Proportional Hazard based Monitoring Schemes for Reliability Data, *Quality and Reliability Engineering International*, 37(8), 3347-3361. DOI: 10.1002/qre.2921.

48. Shah, I., Sajid, F., **Ali, S.**, Rehman, A., Bahaj, S. A., and Fati, S. M. (2021), On the Performance of Jackknife based Estimators for Ridge Regression, *IEEE Access*, 9, 68044-68053. DOI: 10.1109/ACCESS.2021.3077385.

47. **Ali, S.**, (2021), Time-Between-Events Monitoring using Nonhomogeneous Poisson Process with Power Law Intensity, *Quality and Reliability Engineering International*, 37(8), 3157-3178. DOI: 10.1002/qre.2901.

46. Ashraf, A., **Ali, S.**, and Shah, I., (2021), Online Disease Risk Monitoring using DEWMA Control Chart, *Expert Systems with Applications*, 180(15 October), 115059. DOI: 10.1016/j.eswa.2021.115059.

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44. Siddiqua, H., **Ali, S.**, and Shah, I., (2021), Most Recent Changepoint Detection in Censored Panel Data, *Computational Statistics*, 36 (1), 515-540. DOI: 10.1007/s00180-020-01028-5.

43. **Ali, S.**, Raza, S. M. M., Aslam, M., and Butt, M. M. (2021), CEV-HYBRID DEWMA Charts for Censored Data using Weibull Distribution, *Communication in Statistics-Simulation and Computation*, 50(2), 446-461. DOI: 10.1080/03610918.2018.1563147.

42. Saha, M., Dey, S., Yadav, A. S., and **Ali, S.**, (2021), Confidence intervals of the index Cpk for normally distributed quality characteristics using classical and Bayesian methods of estimation, *Brazilian Journal of Probability and Statistics*, 35(1),138-157 DOI: 10.1214/20-BJPS469.

41. **Ali, S.**, (2021), First Passage Time Control Charts assuming Power Law Intensity for Time to jointly Monitor Time and Magnitude, *Quality and Reliability Engineering International*, 37(5), 2034-2064. DOI: 10.1002/qre.2844.

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39. Mansoor, M., Tahir, M. H., Cordeiro, G. M., **Ali, S.**, and Alzaatreh, A. (2020), The Lindley negative-binomial distribution: Properties, estimation and applications to failure data, *Mathematica Slovaca*, 70(4), 917-934. DOI:10.1515/ms-2017-0404.

38. **Ali, S.**, (2020), A Predictive Bayesian Approach to EWMA and CUSUM Charts for Time-Between-Events Monitoring, *Journal of Statistical Computation and Simulation*, 90(16), 3025-3050. DOI: 10.1080/00949655.2020.1793987.

37. Shah, I., Bibi, H., **Ali, S.**, Wang, L., and Yue, Z. (2020), Forecasting one-day-ahead electricity prices for Italian electricity market using parametric and nonparametric approaches, *IEEE Access*, 8(1), 123104 - 123113. DOI:10.1109/ACCESS.2020.3007189.

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35. **Ali, S.**, Ali, S., Shah, I., Siddiqui, G. F., Saba, T., and Rehman, A. (2020), Reliability Analysis for Electronic Devices Cumulative using Generalized Exponential Distribution, *IEEE Access*, 8(1), 108629-108644. DOI: 10.1109/ACCESS.2020.3000951.

34. Raza, S. M. M., **Ali, S.**, Shah, I., Wang, L., and Yue, Z. (2020), On Efficient Monitoring Weibull Lifetimes using Censored Median Hybrid DEWMA Chart, *Complexity*, 2020, Article ID 9232506, 10 pages. DOI: 10.1155/2020/9232506.

33. **Ali, S.**, Zafar, T., Shah, I., and Wang, L. (2020), Cumulative Conforming Control Chart assuming Discrete Weibull Distribution, *IEEE Access*, 8, 10123-10133. DOI: 10.1109/ACCESS.2020.2964602.

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31. **Ali, S.**, and Shah, I. (2020), Monitoring Regularly Maintained Systems Based on the Renewal Process with Generalized Exponential Distribution of Time between Events, *Journal of Testing and Evaluation*, 48 (5), : 3673–3694. DOI: 10.1520/JTE20180044.

30. Aslam, M., **Ali, S.**, Yousaf, R., and Shah, I. (2020), Mixture of Transmuted Pareto Distribution: Properties, Applications and Estimation under Bayesian Framework, *Journal of the Franklin Institute-Engineering and Applied Mathematics*, 357 (5), 2934-2957. DOI: 10.1016/j.jfranklin.2019.11.042.

29. Alizadeh, M., Afify, A. Z., Eliwa, M. S., and **Ali, S.**, (2020), The Odd Log-Logistic Lindley-G Family of Distributions: Properties, Bayesian and Non-Bayesian Estimation with Applications, *Computational Statistics*, 35 (1), 281-308. DOI: 10.1007/s00180-019-00932-9.

28. **Ali, S.**, (2020), A Predictive Bayesian Approach to Sequential Time-Between-Events Monitoring, *Quality and Reliability Engineering International*, 36 (1), 365-387. DOI: 10.1002/qre.2580.

27. Aslam, M., Noor, F., and **Ali, S.** (2020), Shifted Exponential Distribution: Bayesian Estimation, Prediction and Expected Test Time under Progressive Censoring, *Journal of Testing and Evaluation*, 48 (2), 1576-1593, DOI: 10.1520/JTE20170593.

26. Ara, J., **Ali, S.**, and Shah, I., (2020), Monitoring Schedule Time using Exponentially Modified Gaussian Distribution, *Quality Technology & Quantitative Management*, 17 (4), 448-469. DOI: 10.1080/16843703.2019.1668164.

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24. **Ali, S.**, Shafqat, M., Shah, I., and Dey, S. (2019), Bivariate Discrete Nadarajah and Haghighi Distribution: Properties and Different Methods of Estimation, *Filomat*, 33 (17), 5589-5610. DOI: 10.2298/FIL1917589A .

23. Shah, I., Iftikar, H., **Ali, S.**, and Wang, D., (2019). Short-Term Electricity Demand Forecasting Using Components Estimation Technique, *Energies*, 12, 2532. DOI: 10.3390/en12132532

22. Tahir, M., Abid, M., Aslam, M. and **Ali, S.**, (2019). Bayesian estimation of the mixture of Burr Type-XII distributions using doubly censored data, *Journal of King Saud University-Science*, 31 (4), 1137-1150, DOI: 10.1016/j.jksus.2019.04.003.

21. Yousaf, R., Aslam, M., and **Ali, S.** (2019), Bayesian Estimation of the Transmuted Fréchet Distribution, *Iranian Journal of Science and Technology, Transactions A: Science*, 43 (4), 1629-1641. DOI: 10.1007/s40995-018-0581-1.

20. **Ali, S.**, Ali, S., Shah, I., and Khajavi, A. N. (2019), Reliability Analysis for Electronic Devices using Beta Generalized Weibull Distribution, *Iranian Journal of Science and Technology, Transactions A: Science*, 43, (5), 2501-2514. DOI:10.1007/s40995-019-00730-4.

19. Aslam, M., Nawaz, S., **Ali, S.**, and De Siva, S. A. K. P. (2018), Bayesian estimation for the mixture of exponentiated inverted Weibull distribution, *Journal of the National Science Foundation of Sri Lanka*, 46, 587-604. DOI:10.4038/jnsfsr.v46i4.8488 .

18. Raza, S. M. M., **Ali, S.**, and Butt, M. M. (2018), DEWMA control charts for censored data using Rayleigh lifetimes, *Quality and Reliability Engineering International*, 34, 1675-1684. DOI: 10.1002/qre.2354.

17. Tahir, M. H., Cordeiro, G. M., **Ali, S.**, Dey, S., and Manzoor, A. (2018), The inverted Nadarajah–Haghighi distribution: estimation methods and applications, *Journal of Statistical Computation and Simulation*, 88:14, 2775-2798. DOI: 10.1080/00949655.2018.1487441.

16. **Ali, S.** and Pievatolo, A. (2018), Time and magnitude monitoring based on the renewal reward process, *Reliability Engineering & System Safety*, 179, 97-107. DOI: 10.1016/j.ress.2018.01.004.

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25. Shafqat, M., **Ali, S.**, Shah, I., and Dey, S. (2020), Univariate Discrete Nadarajah and Haghighi Distribution: Properties and Different Methods of Estimation, *Statistica*, 80(3), 301-330. DOI:10.6092/issn.1973-2201/9532.

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23. Shah,I., Iftikhar, H., and **Ali, S.**, (2020) Modeling and forecasting medium-term electricity consumption using component estimation technique, *Forecasting*, 2(2), 163-179. DOI: 10.3390/forecast2020009. (HEC Recognized-DOAJ)

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21. **Ali, S.**, Dey, S., Tahir, M. H., and Mansoor, M., (2020) Two-parameter logistic-exponential distribution: Some new properties and estimation methods, *American Journal of Mathematical and Management Sciences*, 39(3), 270-298, DOI:10.1080/01966324.2020.1728453. (HEC Recognized-Scopus)

20. Ali, A., **Ali, S.**, and Khaliq, S., (2019) On the Bayesian Analysis of Extended Weibull-Geometric Distribution, *Journal of Reliability and Statistical Studies*, 12 (2), 115-137. (HEC Recognized-ESCI)

19. Dey, S., **Ali, S.**, and Kumar, D. (2020). Weighted Inverted Weibull Distribution: Properties and Estimation, *Journal of Statistics & Management Systems*, 23 (5), 843-885. DOI: 10.1080/09720510.2019.1669344. (HEC Recognized-ESCI)

18. Tahir, M., Aslam, M., Abid, M., **Ali, S.**, and Ahsanullah, M. (2020). A 3-component mixture of exponential distribution assuming doubly censored data: properties and Bayesian estimation, *Journal of Statistical Theory and Applications*, 19 (2), 197-211, DOI: 10.2991/jsta.d.200508.002. (HEC Recognized-ESCI)

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14. **Ali, S.**, Aslam,M., Abbas, N., Kazmi, S. M. A. and Hasan, T. (2015), On process capability and system availability analysis of the inverse Rayleigh distribution, *Pakistan Journal of Statistics and Operation Research (PJSOR)*, 11 (1), 51-64.(HEC Recognized-ESCI)

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10. Rahman, J., Aslam, M. and **Ali, S.** (2013), Estimation and prediction of inverse Lomax model via Bayesian approach. *Caspian Journal of Applied Sciences Research (CJASR)*, 2(3), 80-93.(HEC Recognized-Zoological Record)

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8. Kifayat, T., Aslam, M. and **Ali, S.**, (2012), Bayesian inference for the parameter of the Power distribution, *Journal of Reliability and Statistical Study (JRSS)*, 5(2), 45-58. HEC Recognized-ESCI

7. Aslam, M., Gilani, G.M., Hussain, D. and **Ali, S.**, (2012), Statistical analysis of the TM model via Bayesian approach. *Pakistan Journal of Statistics and Operation Research (PJSOR)*, 8 (4), 849-857. (HEC Recognized-ESCI)

6. **Ali, S.**, Aslam, M., Kundu, D. and Kazmi, S.M.A. (2012), Mixture of generalized exponential distribution: a versatile lifetime model in industrial engineering processes, *Journal of the Chinese Institute of Industrial Engineers*, 29 (4), 246–269.(HEC Recognized-ESCI)

5. **Ali, S.**, Aslam, M., Kazmi, S.M.A. and Abbas, N. (2012), Scale parameter estimation of the Laplace model using different asymmetric loss functions, *International Journal of Statistics and Probability*, 1(1), 105-127

4. **Ali, S.**, Aslam, M. and Kazmi, S.M.A. (2012), On the Bayesian analysis of the mixture of Laplace distribution using the complete and the censored sample under different loss functions, *Model Assisted Statistics and Applications*, 7 (3), 209-227.

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BOOK CHAPTERS

2. Jan, F., Shah, I., and **Ali, S.**, (2022), Short-Term Electricity Prices Forecasting Using Functional Time Series Analysis. In: Yamada, Y. (ed.) *Forecasting and Risk Management Techniques for Electricity Markets*, MDPI Basel, 99-114. DOI: 10.3390/books978-3-0365-5184-5.

1. Shah, I., Iftikhar, H., **Ali, S.**, and Wang, D., (2019), Short-Term Electricity Demand Forecasting Using Components Estimation Technique. In: Gabaldón, A., Ruiz-Abellón. M. C., and Fernández-Jiménez, L. A. (eds.) *Short-Term Load Forecasting 2019*, MDPI Basel, 99-114. DOI: 10.3390/books978-3-0365-5184-5.

PROCEEDINGS OF CONFERENCES

2. Kazmi, S.M.A., Aslam, M. and **Ali, S.** (2011),), On the Bayesian analysis of Maxwell distribution under different loss functions, *Proceedings of Eight International Conference on Recent Advances in Statistics at National College of Business Administration and Economics Lahore. Jointly organized by Islamic Countries Society of Statistical Sciences (ISOSS) and National College of Business Administration and Economics Lahore February 8-9, 2011,*, 20, 25-36.

1. **Ali, S.**, Aslam, M., and Kazmi, S.M.A. (2010), Bayesian analysis of the Laplace model using noninformative priors for complete and censored data under different loss functions. *Proceedings of 3rd International Conference on Statistics organized by School of Actuarial Sciences, University of Punjab held in November 25-27. pages 63-87.*

R PACKAGE

1. Siddiqa, H., **Ali, S.**, and Shah, I. (2019), cpcens: Changepoint Analysis using Censored Time Series Data,
https://cran.r-project.org/web/packages/cpcens/index.html

CONFERENCE PRESENTATIONS

4. **Ali, S.**, Siddiqa, H. and Shah, I. (2020), Most Recent Changepoint Detection in Censored Panel Data, Bernoulli-IMS One World Symposium 2020, August 24-28, 2020, Bernoulli Society, the Institute of Mathematical Statistics, and the One World Probability Project. Online from USA
https://www.worldsymposium2020.org/home.

3. **Ali, S.**, Pievatolo, A. and Petrone, S. (2016), A predictive Bayesian approach to time-between-events monitoring, The Fourth International Conference on the Interface between Statistics and Engineering, 20-22 June 2016, University of Palermo, Italy.

2. **Ali, S.**, Pievatolo, A. and Petrone, S. (2015), Time and magnitude monitoring based on the renewal reward process, 4th Symposium on Games and Decisions in Reliability and Risk, June 17-19, 2015, Istanbul, Turkey. (Invited speaker)

1. **Ali, S.**, Aslam, M., and Kazmi, S.M.A. (2010), Bayesian analysis of the Laplace model using noninformative priors for complete and censored data under different loss functions. *Proceedings of 3rd International Conference on Statistics organized by School of Actuarial Sciences, University of Punjab held in November 25-27. pages 63-87.*

CONFERENCE/ TRAINING WORKSHOPS ATTENDED

20. 2nd International Conference of Sciences, Revamped Scientific Outlook of 21st Century, 2023, Rawalpindi Women University, 6th Road, Satellite Town Rawalpindi, November 15, 2023.

19. 2nd International Conference on Recent Trends in Statistics and Data Analytics, December 14-15, 2023, School of Natural Sciences, NUST, H-12, Islamabad, Pakistan.

18. Quality and Productivity Research Conference, July 26–29, 2021, Turnbull Conference Center, Tallahassee, FL, USA.

17. GLOB-FIST 2021, May 29-30, 2021, Virtual conference organized by Minhaj University, Lahore, Pakistan.

16. 18th International Conference on Statistical Sciences, February 18-20, 2021, Imperial College of Business Studies, Bahria Town, Shahkam Chowk, Canal Bank Road, Lahore-53720, Pakistan, Lahore, Pakistan.

15. Bernoulli-IMS One World Symposium 2020, August 24-28, 2020, Bernoulli Society, the Institute of Mathematical Statistics, and the One World Probability Project. Online from USA https://www.worldsymposium2020.org/home

14. e-conference on Promoting Applied Sciences in Pakistan (PASP-20), July 20-21, 2020

13. 15th Islamic Countries Conference on Statistical Sciences (ICCS-15), December 21-24, 2019, Lahore Institute Sciences and Technology, Lahore, Pakistan.

12. 16th International Conference on Statistical Sciences, March 5-8, 2018, Islamia College, Peshawar, Pakistan.

11. Data Analysis for Evidence based Policymaking, 29 December 2016, Punjab Economic Research Institute (PERI), Planning and Development Department (P&DD), Government of the Punjab, Pakistan.

10. Punjab Economic Forum 2017, 3-4 April 2017, Punjab Economic Research Institute (PERI), Planning and Development Department (P&DD), Government of the Punjab, Pakistan.

9. The Fourth International Conference on the Interface between Statistics and Engineering, 20-22 June 2016, University of Palermo, Italy.

8. 4th Symposium on Games and Decisions in Reliability and Risk, June 17-19, 2015, Istanbul, Turkey.

7. Closing workshop of the starting grant project FIRB Futuro in Ricerca "Advanced statistical and numerical methods for the analysis of high dimensional functional data in life sciences and engineering" SNAPLE held department of Mathematics, Politechnico Di Milano, may 15-16,014.

6. Bayesian Young Statistician Meeting (BAYSM) 2013, CNR-IMATI, Milan Italy, June 5-6, 2013.

5. International Scientific Workshop organized by Department of Decision Sciences, Bocconi University, Milan, Italy. In the honor of Pietro Muliere September 13-15, 2012.

4. International Conference on Sustaining and Implementing Universal Health Coverage: 4 Perspectives for 5 Continents. Bocconi School of Management, Bocconi University Milan, Italy. 2 February 2012.

3. 3rd International Forum on Food and Nutrition, Bocconi University Milan, Italy. 30 November- 1 December 2011.

2. Eight International Conference on Recent Advances in Statistics "Statistics, Biostatistics and Econometrics" in Honour of Dr. Shahjahan Khan on February 8-9, 2011 at National College of Business Administration and Economics Lahore. Jointly organized by Islamic Countries Society of Statistical Sciences and National College of Business Administration and Economics Lahore, Pakistan.

1. 3rd International Conference on Statistics organized by School of Actuarial Sciences, University of Punjab held in November 25-27, 2010.

PHD RESEARCH THESIS

2. **Syed Muhammad Muslim Raza** (2020), Improved Memory-Type Control Charts for Censored Data. University of Management and Technology Lahore PhD Thesis, Co-supervised, PCD# 21352

1. **Rahila Yousaf** (2019), Some Contributions in Bayesian Analysis for Mixture of the Transmuted Distributions. CMS#16140, Riphah International University PhD Thesis, Co-supervised, PCS#21275

MPHIL RESEARCH THESIS

40. **Asad Raza**, (2024), A Comparative Analysis of Mean Charts for Skewed Distributions. QAU

39. **Sarrosh Fatima**, (2024), Memory-type Control Charts for Monitoring Zero-inflated Negative Binomial Process. QAU

38. **Umer Farooq Sadiq**, (2024), Monitoring the Alternating Renewal Process with Generalized Exponential Censored Data. QAU

37. **Zeeshan Iqbal**, (2024), Shewhart Control Charts for Monitoring Mean and Median of Generalized Exponential Distribution. QAU

36. **Muhammad Hamza Akbar**, (2023), Sample Size Determination for Time-to-Event Endpoints in Randomized Trials with Generalized Exponential Distribution. QAU

35. **Hassan Farooq**, (2023), Measurement Error in Clinical Trials and sample Size Determination. QAU

34. **Muhammad Tahir**, (2023), On the Performance Evaluation of the Risk-adjusted Poisson Hurdle Cumulative Sum Chart. QAU

33. **Saad Waqas**, (2023), Estimation of a Change Point in the Cox Hazard Model. QAU

32. **Saman Riaz**, (2023), A Comparison of Exponentially Weighted Moving Average Charts for Time and Magnitude Monitoring. QAU

31. **Maida Gillani**, (2023), Missing Data Imputation in Clinical Trials. QAU

30. **Rameesa Sarfraz**, (2023), A Comparison of Different Dose-Response Models. QAU

29. **Shayaan Rajput**, (2022), Monitoring Time Between Events using One-sided Exponentially Weighted Moving Averages Chart. QAU

28. **Rimsha Shamim**, (2022), Memory-type Control Charts for Censored Reliability Data. QAU

27. **Nida Khalil**, (2022), A comparison of Estimation Methods for Censored Generalized Exponential Data. QAU

26. **Ali Abbas**, (2022), Control Charts for Zero-Inflated Negative Binomial Distribution. QAU

25. **Maria Asghar**, (2022), Continuous and Discrete Monitoring using Generalized Linear Model. QAU

24. **Sehrish Kanwal Janjua**, (2022), A Comparative Analysis of Mortality Models in South Asian Countries. QAU

23. **Marium Khalil**, (2022), A Comparison of Different Fertility Models for South Asia. QAU

22. **Muhammad Taimoor**, (2021), Epidemiological COVID-19 Modeling of Pakistan. QAU

21. **Nabeel Ahmed**, (2021), Exponentially Weighted Moving Average Control Charts for Type-I Censored Data. QAU

20. **Faryal Ibrar**, (2021), A Comparison of Single and Double Threshold ROC Plots for Mixture Distributions. QAU

19. **Mariyam Waheed**, (2021), Bayesian Sample Size determination for Coefficient of Variation. QAU

18. **Muhammad Farhan Akram**, (2021), Max-EWMA Control Charts for Monitoring Unit Interval Time and Magnitude Data. QAU

17. **Moiz**, (2020), Joint Monitoring using Information Theoretic Control Charts. QAU

16. **Amir Ashraf**, (2020), Memory-type Control Charts for Online Disease Risk Monitoring. QAU

15. **Ayesha Talib**, (2020), Time and Magnitude Monitoring using Maximum Exponentially Weighted Moving Control Charts. QAU

14. **Bushra Bibi** (2020), Bayesian Acceptance Sampling Plans for Discrete and Continuous Data. QAU

13. **Maria Rafique** (2020), Bayesian Survival Analysis of Some Selected Regression Models. QAU

12. **Iqra Mazhar** (2020), A Comparison of Wavelet Based Cumulative Sum Control Charts. QAU

11. **Hajra Siddiqua** (2019), Most Recent Changepoint Detection in Censored Panel Data. QAU

10. **Tanzila Zafar** (2019), Performance of Cumulative Count Charts using Discrete Weibull and Erlang Distributions. QAU

9. **Sanan Fazal** (2019), Bayesian Analysis for Geometric Shapes in Additive Manufacturing. QAU

8. **Farhad Yousaf** (2019), Statistical Inference for Chen Distributions based on Upper Record Values. QAU

7. **Jehan Ara** (2019), Exponentially Modified Gaussian Distribution: Application in Quality Control and Different Methods of Estimation. QAU

6. **Naila Altaf** (2019),Impact of Estimation Error on Risk Adjusted Control Charts. QAU

5. **Shafaqat Ali** (2018), Reliability Analysis for Electronic Devices using Beta Generalized Weibull and Generalized Exponential Distributions. QAU

4. **Muhammad Shafqat** (2018), Univariate and Bivariate Discrete Nadarajah and Haghighi Distributions. QAU

3. **Himmad Khan** (2018), Performance Assessment of some Existing and New Ridge Estimators, Student ID: 15004203001 *MS Statistics Thesis, Co-Supervised with Dr. Muhammad Moeen Butt*, Department of Quantitative Methods, School of Business and Economics, University of Management and Technology, Lahore, Pakistan.

2. **Zaheer Abbas** (2017), A Comparison of Different Weather Forecasting Models, Student ID: 15003203007 *MS Statistics Thesis, Co-Supervised with Dr. Muhammad Moeen Butt*, Department of Quantitative Methods, School of Business and Economics, University of Management and Technology, Lahore, Pakistan.

1. **Hussnain Abbas** (2017), Income Inequality Comparison through Parametric Modeling, Student ID: 14002203007 *MS Statistics Thesis, Co-Supervised with Dr. Muhammad Moeen Butt*, Department of Quantitative Methods, School of Business and Economics, University of Management and Technology, Lahore, Pakistan.

BS RESEARCH THESIS

6. **Muhammad Talat Altaf**, (2024), Exploring Friendship Patterns and Influencing Factors using Social Network Analysis. QAU

5. **Laiba**, (2024), Stock Price Dynamics Analysis using a Dynamic Linear Modeling Approach. QAU

4. **Faiqa Zaheer**, (2024), Decoding COVID-19 Sentiments: A Multi-faceted Analysis of Twitter Discourse. QAU

3. **Laiba Nazneen**, (2023), An Analysis of Different Normalized Transformations. QAU

2. **Mustabshera Piarus**, (2023), A Comparison of Different Zero-inflated Models. QAU

1. **Muhammad Shahzad Sial**, (2023), Count Time Series Modeling of COVID-19. QAU

RESEARCH PROJECTS

5. Time and Magnitude Monitoring for Exponentially Modified Gaussian Distribution. Project funded by University Research Fund, Quaid-i-Azam University, Islamabad, Pakistan. (Amount: 0.08 Millions, Duration: August 2022- December2023, Role: Principle Investigator)

4. Monitoring the Regularly Maintained Systems assuming an Exponentiated Class of Lifetime Distribution of the Renewal process. National Research Program for Universities (NRPU) project funded by Higher Education Commission (HEC), Pakistan. (Project#8535, Amount: 0.348 Millions, Duration: March 2019-March 2020, Role: Principle Investigator)

3. A comparison of Reliability analysis for electronic devices using beta generalized Weibull and generalized exponential distributions. Start-up project funded by Higher Education Commission (HEC), Pakistan. (Project#1859, Amount: 0.430 Millions, Duration: March 2018-March 2019, Role: Principle Investigator)

2. Hierarchical modeling for determinants of out-of-school children in Pakistan. Start-up project funded by Higher Education Commission (HEC), Pakistan. (Project#1870, Amount: 0.430 Millions, Duration: March 2018-March 2019, Role: Co-Principle Investigator)

1. Bivariate Nadarajah and Haghighi Probability Distribution. Project funded by University Research Fund, Quaid-i-Azam University, Islamabad, Pakistan. (Project#1879, Amount: 0.15 Millions, Duration: October 2017-October 2018, Role: Principle Investigator)

EDITORIAL AND REVIEWER ACTIVITIES

Managing Editor
- Journal of Quantitative Methods (May 2020–To Date), Department of Quantitative Methods, School of Business and Economics, University of Management and Technology, Lahore, Pakistan.

Editor
- Journal of Quantitative Methods (JQM Founding Editor) (December 2016–May 2020), Department of Quantitative Methods, School of Business and Economics, University of Management and Technology, Lahore, Pakistan.
- IEEE ACCESS Associate Editor
- Journal of Mathematics Editor

Editorial Board Member
- International Journal of Statistics and Probability, Published from Canada http://ccsenet.org/journal/index.php/ijsp/about/editorialTeam
- International Journal of Algebra and Statistics, published by Modern Science Publisher.

Reviewer
- International Journal of Quality & Reliability Management,
- Computational Statistics and Data Analysis,
- Journal of Applied Statistics,

- Pakistan Journal of Statistics and Operation Research,
- Journal of Statistical Computation and Simulation,
- International Journal of System Science,
- International journal of Production Research,
- Applied Mathematical Modelling,
- Reliability Engineering & Systems Safety,
- Quality and Reliability Engineering International,
- Hacettepe Journal of Mathematics and Statistics,
- Mathematics and Computers in Simulation,
- Entropy
- Brazilian Journal of Probability and Statistics

Awards and Distinctions

- Researcher with Grant (Post Doc.), Bocconi University, 2016
- Bocconi University Ph.D Scholarship, Sep 2011 to Aug 2015
- 2nd Position in M.Phil Statistics
- 3rd Position in M.Sc Statistics
- First position In Statistics In B.Sc, University of Sargodha.
- International Kangaroo Mathematics Contest In Pakistan Organized by School of Mathematical Sciences, GC University Lahore, Pakistan.
- First position In ICS (BISEGRW)

Work Experience

Bioresource Research Center (BRC)
Project Officer (Statistics) — Feb 2011 to July 2011
Population Census Organization Islamabad, Pakistan.
Internee — Feb 2010 to Jan 2011
Center for Research & Security Studies (CRSS)
Data Analysts in SPSS — Sep 2008 to Feb 2009

Membership in Professional Societies

- Institute of Mathematical Statistics (IMS)
- European Network for Business and Industrial Statistics (ENBIS)
- International Society of Bayesian Analysis (ISBA)
- ASTM International

Services to Profession

- Elected Academic Council QAU Member 2023-24
- Departmental Focal Person for Prime Minister Laptop Scheme
- Member Departmental Board of Studies
- Member Board of Faculty Natural Sciences
- Member Departmental Tenure Review Committee

References

Prof. Antonio Pievatolo (Ph.D)

- Researcher at CNR-IMATI, Via Bassini 15, 20133 Milan, Italy.
  Email: antonio.pievatolo@mi.imati.cnr.it
  Phone: 00390223699520
  http://www.imati.cnr.it/index.php/people/8-curricula/101-antonio-pievatolo

Prof. Sonia Petrone (Ph.D)
- Full Professor (and Director of the PhD in Statistics program) at Department of Decision Sciences, via Roentgen, Bocconi University, 20136 Milan, Italy.
  Email: sonia.petrone@unibocconi.it
  Phone: 00390258365602
  http://didattica.unibocconi.eu/docenti/cv.php?rif=48897

Prof. Dr. Muhammad Aslam

- Current Affiliation: Professor and Incharge-Statistics Discipline, Department of Mathematics and Statistics, Faculty of Engineering and Applied Sciences, Riphah International University, Islamabad, Pakistan.
  Previous Affiliation: Professor and Former Chairman, Department of Statistics, Quaid-I-Azam University, Islamabad 45320, Pakistan.
  Phone: 00923005191826
  E-mail: aslamsdqu@yahoo.com

Dr. Ismail Shah

- Associate Professor, Department of Statistics, Quaid-i-Azam University, Islamabad, Pakistan
  Phone: 00923117766910
  E-mail: ishah@qau.edu.pk

Dr. Muhammad Riaz

- Professor at Department of Mathematics & Statistics,
  King Fahd University of Petroleum & Minerals (KFUPM)
  Dhahran, 31261, Saudi Arabia
  E-mail: riaz76qau@yahoo.com
  Phone: 00966138607622

Mr. Shahbaz Akhtar

- Director, Pakistan Electronic Media Regulatory Authority
  Phone: 00923006210657
  E-mail: shahbaz@pemra.gov.pk