REHAN AHMAD KHAN SHERWANI

Professor – Statistics (BPS-21)

Contact No: 092 334 4118684 **Primary Email:** rehan.stat@pu.edu.pk **Secondary Email:** stat4u@gmail.com Address: College of Statistical Sciences, University of the Punjab, Q.A. Campus, Lahore (54590), Pakistan.



Quantitative Reasoning

Mortality Data Analysis

Life Contingency & Life Tables

Probability

VISION AND MISSION

I am looking to Perceive, Propose, and Promote research in Applied Statistics, Data Mining, and Quantum Computing. I am committed to advancing knowledge through rigorous research, fostering interdisciplinary collaboration, and promoting impactful applications. My goal is to empower learners and researchers to harness data and computation for solving complex, real-world challenges.

AREAS OF INTEREST

Statistical Modeling, Control Charts, Applied Statistics, Distribution Theory, Meta-Analysis, Data Mining, and Quantum Computing.

TEACHING EXPERIENCE

College of Statistical Sciences, Punjab University, Lahore - Pakistan (2008-date)

Teach the following Courses to the classes of BS, M.Sc. M.Phil., and Ph.D. statistics degree programs.

•	FORTRAN 77	٠	Statistical Computer Packages	٠	Structural Equation Mod		
			(SPSS/ SPSS Modeler/ STATA/ SAS)		(AMOS/ LISRE	L/ R)	
٠	Research Methods	٠	Multilevel Models	٠	Probability	&	Prol
			(mLwin/ SPSS/ R)		Distributions		

- (mLwin/SPSS/R) Design & Analysis of Experiments
- **Business Statistics** • Biostatistics
- Multivariate Analysis
- Demography
- Survival Analysis
- Institute of Business and Information Technology, Punjab University, Lahore Pakistan (2013-19) Visiting Faculty: Teach the courses of Business Statistics, and Statistics for Business Decision Making to the BBIT and MBIT degree programs. The courses covered both foundational and advanced topics of data cleaning, data mining, and data analytics with hands-on learning on SPSS and SPSS Modeler to address the real-world computational challenges associated with large datasets.

National University of Computer and Emerging Sciences (FAST), Lahore – Pakistan (2013-19)

Visiting Faculty: Teach the courses of Business Statistics, and Statistics for Business Decision Making to the BBIT and MBIT degree programs. The courses covered both foundational and advanced topics of data cleaning, data mining, and data analytics with hands-on learning on SPSS and SPSS Modeler to address the real-world computational challenges associated with large datasets.

Institute of Business Administration (IBA), Punjab University, Lahore – Pakistan (2009, 2021, 2022)

Visiting Faculty: Teach the courses of Mathematics and Statistics for Management, Advanced Statistics to the BBA and MBA-Executive degree programs. The courses covered a wide range of basic to advanced statistical methods and data mining techniques that also incorporated hands-on training using leading statistical and data mining software tools, including SPSS, SPSS Modeler, and Orange Data Mining.

University of Health Sciences (UHS), Lahore - Pakistan (2025)

Visiting Faculty: Design and teach a course of *Advanced Biostatistics* to the Ph.D. in Public Health degree program. The course was structured to provide both theoretical foundations and practical exposure to advanced statistical and data mining methods with hands-on experience on *SPSS, SPSS Modeler and Orange Data Mining*.

PAK AIMS: The Institute of Management Sciences, Lahore – Pakistan (2016)

Visiting Faculty: Teach a course of *Business Statistics* to the MBA-Executive degree program. The course covered the basic and advanced topics of statistics and data mining with hands on experience on SPSS and SPSS Modeler.

Institute of Biochemistry and Biotechnology (IBB), Punjab University, Lahore – Pakistan (2009-18)

Visiting Faculty: Design and teach the courses of Biostatistics, and Advanced Biostatistics to the undergraduate (BS Biochemistry, BS Biotechnology) and doctoral (Ph.D. Biochemistry, Ph.D. Biotechnology) degree programs. The courses are aligned with emerging trends in data science and life sciences research with emphasized on the practical application of statistical and data mining techniques using SPSS and Orange Data Mining, equipping students with skills in gene expression analysis, identification of differentially expressed genes, gene set enrichment, predictive modeling for disease diagnostics, and risk factor analysis.

Institute of Biochemistry and Biotechnology (IBB), Punjab University, Lahore – Pakistan (2009-18)

Visiting Faculty: Design and teach the courses of Introductory Statistics, and Applied Statistics to the undergraduate classes of BS Nutrition and Food Sciences. The courses covered both fundamental and advanced topics in data cleaning, data mining, and statistical analysis. The curriculum was designed to equip students with Dietary Pattern Analysis and Personalized Nutrition through the use of classification, clustering, association rule learning, and regression methods with emphasis on hands-on training with leading statistical and data mining software tools such as SPSS, SPSS Modeler, and Orange Data Mining.

Department of Space Science, Punjab University, Lahore – Pakistan (2018-19) Institute of Communication Studies, Punjab University, Lahore – Pakistan (2010) Hailey College of Commerce, Punjab University, Lahore – Pakistan (2008, 2014, 2015, 2022, 2023) Institute of Chemistry, Punjab University, Lahore – Pakistan (2009-15) Visiting Faculty: Design and teach the courses of Introductory Statistics, Advanced Statistics, Biostatistics,

and Business Statistics to the BS, M.Phil., and Ph.D. degree programs. These courses covered a range of topics on statistical learning with hands on practice on SPSS, SPSS Modeler and STATA.

WORKSHOPS/SEMINARS/CONFERENCES

RESOURCE PERSON

- Two days hands-on practice workshop on "Data Visualization and Mining Tools for Management Sciences" held on 16-17 May, 2025 at HSM, University of Management & Technology, Lahore-Pakistan.
- One day workshop on "Quantitative Reasoning" held on February 26, 2025 at Department of Statistics, Govt. College University Lahore, Pakistan.
- Two days hands-on practice workshop on "Psychological Data Analysis: A Hands-On Workshop with Orange and SPSS Modeler" held on 20-21 January, 2025 at Institute of Applied Psychology, University of the Punjab, Lahore-Pakistan.
- One day hands-on practice workshop on "Advanced Data Analysis using Structural Equation Modeling with AMOS" held on January 08, 2025 at Institute of Applied Psychology, University of the Punjab, Lahore-Pakistan.
- One day hands-on practice workshop on "Smart Analytics: Classification and Predictive Modeling with Orange Data Mining" held on December 23, 2024 at PATHWAYS Global Education, Lahore-Pakistan.

- Two days hands-on practice workshop on "Disease Classification using Data Mining Techniques for Healthcare Professionals" held on 18-19 November, 2024 at Sahara Medical College, Narowal-Pakistan.
- One day hands-on practice workshop on "Statistical Analysis" held on August 12, 2024 at University of Jhang, Jhang-Pakistan.
- **4** One day hands-on practice workshop on "Data Mining and Analysis with Orange and SPSS" held on April 10, 2024 at Institute of Applied Psychology, University of the Punjab, Lahore-Pakistan.
- One day seminar on "Importance of Statistics" held on November 06, 2023 at Queen Marry College, Lahore-Pakistan.
- One day hands-on practice workshop on "Data Management and Quantitative Analysis using SPSS" held on March, 2023 at HSM, University of Management & Technology, Lahore-Pakistan.
- One day hands-on practice workshop on "Structural Equation Modelling with AMOS and SmartPLS" held on February 01, 2023 at Institute of Applied Psychology, University of the Punjab, Lahore-Pakistan.

* conducted multiple workshops on SPSS/STATA/SPSS Modeler from one day to five days at College of Statistical Sciences, University of the Punjab, Lahore-Pakistan.

KEYNOTE SPEAKER

- "Quantum Computing and Statistics", Third PISTAR International Conference on Global Statistics, ISOSS House, Lahore, Pakistan February, 2025.
- "Quantum Computing and Statistics", 3rd Global Science, Technology, and Management Conference (GSTMC-25), University of Jhang, Jhang, Pakistan January, 2025.
- "Quantum Computing and Statistics", Third International Conference on Recent Trends in Statistics and Data Analytics, NUST, Islamabad, Pakistan December, 2024.
- "Multilevel Models & Applications", 3rd International Conference on Statistical Sciences: Data Analytics and Official Statistics for Governance, GCU, Lahore, Pakistan October, 2023.
- "Big Data & Business Analytics", 2nd International Conference on Business Administration, IBA, Lahore, Pakistan March, 2023.

* Organized/participated/presented/Session Chaired in multiple national and international conferences.

PROFESSIONAL SERVICES

- Editor/Associate Editor/Managing Editor, Pakistan Journal of Statistics and Operations Research (IF 1.15), College of Statistical Sciences, Punjab University, Lahore-Pakistan (2008-date).
- **Expert, MICS7 Data Integration and Report Compilation (DIRC) Workshop, Planning & Development Board/UNICEF, Govt. of the Punjab, Pakistan (2024).**
- Coordinator, BS in Biostatistics degree program, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2021-date).
- Controller of Examination, BS in Biostatistics degree program, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2021-date).
- Coordinator, Master in Business Statistics and Management (MBSM) degree program, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2014-20).
- Controller of Examination, Master in Business Statistics and Management (MBSM) degree program, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2014-20).

- Coordinator, BS in Actuarial Sciences degree program, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2020-23).
- Controller of Examination BS in Actuarial Sciences degree program, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2020-23).
- **4** Chairman, Shops/Canteens/Kiosks Committee, Punjab University, Lahore-Pakistan (2025-date).
- Chairman, Purchase Committee, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2015-date).
- Chairman, Associate Degree Program (ADP) for the subject of Statistics, Punjab University, Lahore-Pakistan (2019-20).
- Chairman, Curriculum Development Committee for BS in Actuarial Sciences degree program, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2017-18).
- Chairman, Curriculum Development Committee for BS in Operations Research degree program, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2017-18).
- Chairman, Curriculum Development Committee for BS in Data Sciences degree program, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2019-20).
- Chairman, Curriculum Revision Committee for BS (Statistics) & BS (Biostatistics) according to HEC Undergraduate Policy 2024, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2024).
- Chairman, Constitution of Statistical Research and Consultancy Centre Committee, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2023-24).
- Chairman, College Quality Assurance Committee, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2019-21).
- Chairman, College Disciplinary Committee, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2023-date).
- Chairman, College Sports Committee, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2022-24).
- Chairman, College Annual Function Committee, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2022).
- **4** Focal Person, Quality Steering Committee, Punjab University, Lahore-Pakistan (2018-19).
- Focal Person, Office of Research Innovation & Commercialization (ORIC), College of Statistical Sciences, Punjab University, Lahore-Pakistan (2023-24).
- Focal Person, Intercollegiate Sports Championship, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2018-20).
- Member, National Committee to Evaluate Research Journals of Physical Sciences, Higher Education Commission (HEC) of Pakistan, Islamabad-Pakistan (2021-date).
- **4** Member, Senate, Punjab University, Lahore-Pakistan (2022-date).
- **4** Member, Academic Council, Punjab University, Lahore-Pakistan (2022-date).
- **4** Member, Faculty Board for Sciences, Punjab University, Lahore-Pakistan (2020-date).
- Member, Department Doctorate Coordination Committee (DDPC), College of Statistical Sciences, Punjab University, Lahore-Pakistan (2013-date).

- **4** Member, Punjab Technical Committee for Census 2017, Govt. of Punjab, Pakistan (2017-18).
- **4** Member, Faculty of Science Purchase Committee, Punjab University, Lahore-Pakistan (2019-24).
- **Wember**, Career Counseling and Placement Committee, Punjab University, Lahore-Pakistan (2021-23).
- Member, Temporary/Daily Wages Administrative Staff Recruitment Committee, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2022).
- Member, Board of Studies for Statistics, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2017-date).
- Member, Board of Studies for Statistics, Department of Statistics, Govt. College University Faisalabad, Faisalabad-Pakistan (2018-24).
- Member, Board of Studies for Data Sciences, Centre for Data Science, Govt. College University Faisalabad, Faisalabad-Pakistan (2020-23).
- Member, Board of Studies for Statistics, Department of Statistics, Govt. College University Lahore, Lahore-Pakistan (2024-date).
- Member, Board of Studies for Remote Sensing, Centre for Remote Sensing, Punjab University, Lahore-Pakistan (2021-date).
- Member, Board of Studies for Statistics, Department of Statistics, University of Gujrat, Gujrat-Pakistan (2025-date).
- Member, Board of Studies for Statistics, Department of Statistics, University of Jhang, Jhang-Pakistan (2022-date).
- Member, Board of Studies for Statistics, Department of Statistics, Women University of Sialkot, Sialkot-Pakistan (2022-date).
- Member, Board of Studies for Statistics, Department of Statistics, Bahauddin Zakarya University, Multan-Pakistan (2018-date).
- Member, Board of Studies for Statistics, Department of Statistics, Home Economics University, Lahore-Pakistan (2023-date).
- Member, Chief Minister's Honhaar Scholarship, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2024).
- Member, Faculty Eligibility Determination Committee for Statistics, Faculty of Sciences, Punjab University, Lahore-Pakistan (2024-25).
- Member, Board of Faculty of Sciences Sub-Committee to review the scheme of studies for BS Biophysics & Nantechnology, Solid State Physics, Punjab University, Lahore-Pakistan (2025).
- Member, College Admission's Committee for BS, M.Phil. and Ph.D. degree programs, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2014-date).
- Member, University Disciplinary Committee for Examinations, Controller of Examinations, Punjab University, Lahore-Pakistan (2023-date).
- Member, Departmental TTS Review Committee, College of Statistical Sciences, Punjab University, Lahore-Pakistan (2023-date).
- Member, Departmental TTS Review Committee, Department of Statistics and Computer Sciences, University of Veterinary and Animal Sciences, Lahore-Pakistan (2021-date).
- **4** Member, Multidimensional Poverty Index (MPI) Training Workshop, United Nations, Oxford

University, Ministry of Planning, Development and Reform, Islamabad-Pakistan (2018).

- Reviewer, Reviewed multiple research articles for national and international journals including Journal of Applied Statistics, Journal of Mathematics, Kuwait Journal of Sciences, PLOS One, International Journal of Leadership and Behavior, journal of Statistics, Pakistan Journal of Statistics, Symmetry, etc.
- **4** External Examiner, Evaluation of Ph.D., M.Phil., and BS research thesis/projects/reports for multiple departments in several universities in Pakistan (2006 to date).

				L .		[
S. #	Year	Title	Donor Agency	Amount (million Rs)	Role	Status
1.	2025	Development of the Quantum Statistical Methods and Applications to Medical Diagnostics	Higher Education Commission, Pakistan	15.5	Principal Investigator	Submitted
2.	2025	Forecasting Electricity Demand and Supply for the Sustainable Policy Solutions for Pakistan	Higher Education Commission, Pakistan	7.0	Co-PI	Submitted
3.	2025	Classical and Quantum Machine Learning Methods for Data Analysis in High Energy Physics	Higher Education Commission, Pakistan	10.0	Co-PI	Submitted
4.	2024	The Power of Quantum computing in Investment Predictions: A Case Study on Pakistan's Economic and Social Dynamics	Rasta, PIDE	5.0	Principal Investigator	In review
5.	2024	Estimating the Economics of Climate Change in Pakistan	Rasta, PIDE	5.0	Co-PI	In review
6.	2024	Applications of Quantum Computing in Agriculture: Systematic Review and Meta-Analysis	University of the Punjab, Pakistan	0.300	Principal Investigator	Completed
7.	2023	A Note on Some Basic Experimental Design Methods under Interval Data	University of the Punjab, Pakistan	0.300	Principal Investigator	Completed
8.	2023	Pedagogical Workshops for Cultivating the Humanities and Social Science Research in Lahore – Pakistan.	Association for Asian studies, Inc	3.64	Principal Investigator	Submitted
9.	2023	Estimation of Arts and Cultural Related Spending by the Audiences and its Impact on Economy of the Pakistan	UNESCO	28.37	Principal Investigator	Submitted
10.	2023	Investigating Cholera Hotspots, Optimal Vaccination Strategies and its impact on Cholera Incidence in Faisalabad, Punjab, Pakistan	Wellcome Foundation, UK	631.36	Principal Investigator	Submitted
11.	2022	Estimation of Financial, Social and Psychological Burden on Caregivers of COVID-19 Patients in Punjab-Pakistan	Higher Education Commission, Pakistan	2.5	Principal Investigator	Completed
12.	2022	Fixed and Random Effect Meta-Analysis of Patient Preferences for Laboratory Results Notification	University of the Punjab, Pakistan	0.250	Principal Investigator	Completed
13.	2022	Effect of Dr Allen's Device for Prostate Treatment on Erectile Dysfunction in Men with Chronic Prostate Diseases: BPH and CP/CPPS	Director of Fine Treatment, Oxford, United Kingdom	1.8	Co- PI/Consultant (Statistician)	Approved
14.	2022	Estimation of Economic Burden of Cardiovascular Diseases in the Capital City of Punjab-Pakistan	National Institute of Health	2.0	Principal Investigator	In-progress
15.	2021	Ensuring quality fortification within food distribution networks for vulnerable populations during/post-Covid in Pakistan	Global Alliance for Improved Nutrition (GAIN)	24.6678	Co- PI/Consultant (Statistician)	Completed
16.	2021	Thermobalancing therapy and Dr. Allen's device for kidney stone disease	Director of Fine Treatment, Oxford, United Kingdom	1.8	Co- PI/Consultant (Statistician)	Completed
17.	2021	Thermobalancing therapy and Dr. Allen's device for low back pain.	Director of Fine Treatment, Oxford, United Kingdom	1.5	Co- PI/Consultant (Statistician)	Completed

FUNDED RESEARCH PROJECTS

18.	2020	Molecular genetic investigation of isolated ventricular septal defects (VSDS) in Pakistani children and designing a prenatal screening and awareness strategy	Higher Education Commission, Pakistan	1.6	Statistical Analyst	Under Review
19.	2019	Meta-Analysis of genotypes of hepatitis C virus (HCV) in Pakistan	University of the Punjab, Pakistan	0.150	Principal Investigator	Completed
20.	2017	CPEC and its impact on political, social & economic development in Pakistan: prospects from youth in higher education institutions in Punjab, Pakistan	Punjab Higher Education Commission (PHEC)	2.991	Principal Investigator	Under Review
21.	2016	Awareness about the importance & scope of statistics education among secondary standard school children	Higher Education Commission & University of the Punjab, Pakistan	0.990	Principal Investigator	Completed
22.	2015	Risk management in Islamic financial institutions	University of the Punjab, Pakistan	0.150	Principal Investigator	Completed
23.	2013	Contextual determinants of job satisfaction of Punjab University faculty members	University of the Punjab, Pakistan	0.125	Principal Investigator	Completed
24.	2010	Quality of life of breast cancer survivors in Punjab, Pakistan	Higher Education Commission, Pakistan	4.50	Report Writing	Completed

RESEARCH SUPERVISION

☆ Ph.D.

Sr.	Scholar Name	Session	Thesis Title	Status
1.	Ms. Amna Riaz	2022-27	Development of the Quantum Statistical Methods and their Applications	In-process
2.	Ms. Rafia Butt	2021-26	Development of Quantum Algorithms for Efficient Classification: Applications to Medical Data	In-process
3.	Ms. Ayesha Pari	2024-28	Quantum Computing and Applications to Distribution Theory	In-process
4.	Ms. Sehar Saleem	2013-18	Optimal Score Functions for Robust Estimation of Multilevel Models in the Presence of Outliers	Completed
5.	Ms. Madiha Liaqat	2017-22	Development and Application of Methodology for the Joint Analysis of Complex Survival-Longitudinal Data Incorporates Missingness.	Completed
6.	Ms. Faiza Dawood	2016-21	Combined Shewhart- homogenously weighted moving average control charts	Completed
7.	Mr. Fakhar Mustafa	2018-23	On Designing the Control Charts for Monitoring the Count Data	Completed

<u>****</u>*M.Phil.

Sr.	Scholar Name	Session	Thesis Title
1.	Eman Wasim	2024-26	Financial Modeling of Pakistan Stock Exchange using Data Mining and Quantum Neural Networks
2.	Farwa Wagas	2024-26	Image Classification using Data Mining and Quantum Computing
3.	Shahzaib	2023-25	Modeling the Child Well-being using Data Mining Techniques: Evidence from the MICS Surveys Pakistan
4.	Fizza Razaq	2023-25	Predictive Modeling of Investment Patterns in Pakistan Using Data Mining and Advanced Machine Learning Algorithms
5.	Asad Ali Khan	2022-24	Psychological Burden of COVID-19 Patients: Evidence from Meta-analysis
6.	Uswa Sehar	2021-23	Enhancing Road Accident Prediction: A Comparative Analysis of Quantum Neural Network and Traditional Machine Learning Approaches
7.	Sumbal Amjad	2021-23	Predicting of Under-five Mortality in Pakistan using Supervised Machine Learning Models: Evidence from Pakistan Demographic and Health Surve 2017-18
8.	Maham Rafique	2021-23	Structural Equation Models for the Estimation of Psychological Well-being of Covid-19 Caregivers in Pakistan
9.	Iqra Altaf	2021-23	A Comparative Analysis of Quantum Neural Network and Traditional machine learning Approaches for the Prediction of Human Development Index (HDI)

	Sadia Pervaiz	2020-22	Meta-Analysis for characteristics associated with Diabetes Mellitus in Pakistan: A
10.	Khokhar	2020 22	Comprehensive study
	Rabia Bibi	2020-22	Meta-Analysis of Global Food Economics and food Security
12.	Nida Asif	2020-22	Meta-Analysis of Factors Associated with Cardiovascular Disease in Pakistan: A Comprehensive Review
13.	Arooj Naeem	2020-22	Some Statistical Methods of Meta-Analysis under Indeterminacy
14.	Maham Aslam	2020-22	A Note on Survival Analysis under Indeterminacy
15.	Tajala Fatima	2020-22	Some Sampling Distributions under Indeterminacy: Properties and Applications
16.	Rabiya Fatima	2018-20	A new Double Exponentially Weighted Moving Average Control Chart using Multiple Dependent State Repetitive Sampling.
17.	Rafia Butt	2018-20	Fixed Effect Meta-Analysis of Characteristics Associated with Respiratory CoronaVirus-2
18.	Hira Naeem Khan	2018-20	Double Progressive Mean Control Chart Under Multiple Dependent State Repetitive Sampling
19.	Muhammad Ilyas	2018-20	Variable Control Charts utilizing Ranked-Multiple Dependent State Repetitive Sampling Scheme
20.	Aqsa Abbas	2017-19	Moderating Variable Effects in Multilevel Models: A Simulation Based Study.
21.	Jaweria Shahid	2017-19	A Systematic Review and Meta-Analysis of Genotypes of Hepatitis B Virus (HBV) in Pakistan.
22.	Munawar Iqbal	2017-19	Modeling Non-linear Behavior of Independent Variables.
23.	Sidra Zain	2017-19	Generalized Linear Mixed Models: An Application on Limited Overs International Cricket Data.
24.	Saba Younus	2017-19	Multilevel Growth Curve Models for Longitudinal Data: An Application on Human Development Index Data.
25.	Humera Qasim	2016-18	Performance Evaluation of DEWMA3 in Phase-II for Capturing Changes in Simple Linear Profiles based on Run Rule Mechanism.
26.	Maira Nawazish	2016-18	Multiple Imputation of Missing Data in Multilevel Models and its Comparison with other Techniques: A Simulation based Analysis.
27.	Muhammad Waqas	2016-18	Transmuted Inverted Kumaraswamy Distribution: Properties and Applications.
28.	Anira Khalil	2016-18	Air Pollutants and Risk of Cardiovascular, Lung Cancer and Respiratory Mortality in Asian Countries: A Systematic Review and Meta-Analysis.
29.	Ayesha Dawood	2016-18	Survival Analysis and Multilevel Survival Analysis of Breast Cancer Survivors in Punjab, Pakistan.
30.	Kanwal Saleem	2015-17	Meta-Analysis of Factors Associated with Diabetes in Pakistan and Across the Globe: Random Effect Model Approach.
31.	Maham Faheem	2015-17	Meta-Analysis of Factors Associated with Disease Burden Estimation of Influenza: Random Effect Model Approach.
32.	Amna Aslam	2015-17	Transmuted Exponentiated Dagum Distribution with Applications.
33.	Sidra Altaf	2015-17	Power of Non-parametric Tests for Survival Analysis under Different Sample Sizes and Censored Rates.
34.	Abdullah Bilal	2014-16	Multilevel Growth Models for GDP Influencing Factors.
35.	Gofran	2014-16	Associated Factors of Age at First Birth in Punjab, Pakistan: A Discrete-Time Event History Analysis
36.	Hafiz Nawaz		Government Debt and Budget Deficit Nexus in G8 and SAARC Countries: Evidence from
37.	Muhammad Arfan	2013-15	Ordinal Logit and Multilevel Ordinal Logit Models: An Application on Wealth Index MICS-Survey Data
	Tatima Archad	2013-15	Two Sample Mean Testing in High Dimensional Data.
38.	Fatima Arshad	2015-15	

********BS/M.Sc.

Supervised 200+ research thesis and some of the titles are:

Sr.	Scholar Name	Session	Thesis Title
1.	1. Muhammad Asif 2023-25		Decision Trees and the Classification of Student Satisfaction by the Punjab University
2.	Hifza	2023-25	Identification of Crime Patterns in Pakistan by using Data Mining Techniques
3.	Saira Nawaz	2021-25	An Exploration of Knowledge, Attitude and Practices about Monkepox using Machine Learning Techniques
4.	Ayesha Ishtiaq	2021-25	An Exploration of Nutrition and Health Consciousness among Youth using Machine Learning Techniques

5.	Muhammad Abdullah Javaid	2021-25	Data Mining of Non-communicable Diseases Indicators in Pakistan and Associated Countries
6.	Alishba Sheikh	2021-25	A Statistical Study of Brand Positioning using Classical and Machine Learning Methods
7.	Eman Waseem	2020-24	Patients' Preferences for Physicians' Attire: Fixed Effect Meta-Analysis
8.	Farwa Waqas	2020-24	Patient's Preferences for Knee Replacement: A Meta-Analysis Approach
9.	Ansharah Saeed	2021-23	A Statistical Analysis of Prevalence of Depression, Anxiety and Stress among University Students in Pakistan: A Meta-Analysis Approach
10.	Nida Asif	2020-22	Meta-analysis of Factors Associated with Cardiovascular Disease in Pakistan: A Comprehensive Review
11.	Muneeba Sheraz	2020-22	Credibility and Trust of Communication B/W Government & Public Sector Media Centres for extreme events in Pakistan

RESEARCH PUBLICATIONS

S. #	Year	Title of Paper	Name of the Journal	IF/ HEC Cat.
1.	2025	An Artificial Neural Network Approach for Psychometric Assessment of Stress, Anxiety, and Depression in Women	Journal of Statistics	Y
2.	2025	Estimating the Economic Burden of COVID-19 Survivors in Punjab, Pakistan	PLOSOne	2.9 (Accepted)
3.	2025	Neutrosophic Extension of the Negative Binomial Distribution: Properties and Applications to Interval-Valued Data	Advances and Applications in Statistics	0.2
4.	2025	Properties and Applications of Neutrosophic Burr XII Distribution	International Journal of Computational Intelligence Systems	2.5
5.	2025	An Application of Neutrosophic Statistics: Extending Relative Risk and Odds Ratios to Handle Uncertainty in Epidemiology and Biostatistics	JP Journal of Biostatistics	0.1
6.	2025	Impact of Short-Term Aromatherapy and COVID-19 Pandemic on Stereotypic Behavior and Cortisol Concentration in Captive Big Cats	Pakistan Journal of Zoology	0.5
7.	2025	Factors Affecting the Students' Academic Achievements: A Multilevel Modeling Approach	Journal of Statistics	Y
8.	2024	Modeling of Quantum Cognitive Perceptual Associative Memory for Conscious Agents: A Parametrized Circuit of Quantum Neural Networks	IET Quantum Communication	3.2
9.	2024	Relationship Between Prostate-Specific Antigen, Alkaline Phosphatase Levels, and Time-to-Tumor Shrinkage: Understanding the Progression of Prostate Cancer in a Longitudinal Study	BMC Urology	1.7
10.	2024	Solving Schrödinger Wave Equation for the Charmonium Spectrum Using Artificial Neural Networks	Advances in High Energy Physics	1.7
11.	2024	A progressive mean control chart for dispersed count data considering tail behavior	Quality Technology & Quantitative Management	2.8
12.	2024	On Designing a New Control Chart Using the Generalized Conway– Maxwell–Poisson Distribution to Monitor Count Data	processes	3.5
13.	2024	Neutrosophic Discrete Geometric Distribution	Advances and Applications in Statistics	0.2
14.	2023	Determinants of rural household poverty in Pakistan with multilevel approach	Cogent Economics & Finance	ESCI/X
15.	2023	Performance Evaluation of DEWMA3 in Phase-II for Capturing Changes in Simple Linear Profiles Based on Run Rule Mechanism	Scientific Reports	4.997
16.	2023	Enhanced Performance of Mixed HWMA-CUSUM charts using Auxiliary Information	PLOSOne	3.752
17.	2023	Smoking and the Prevalence of Covid-19: A Systematic Review and Meta- analysis	AIMS Public Health	3.3
18.	2023	A Modified Group Chain Sampling Plan for lifetime following Kumaraswamy Generalized Power Weibull Distribution with Minimum Angle Approach	Scientia Iranica	1.416
	1	1	1	L

19.	2023	A new exponentially weighted moving average control chart to monitor count data with applications in healthcare and manufacturing	Journal of Statistical Computation and Simulation	1.2
20.	2023	Uncertainty-based sampling plans for various statistical distributions	AIMS Mathematics	2.739
21.	2023	Development of a new modified Hogg type adaptive scheme for multilevel models with diverse error distributions.	Communication in Statistics- Theory and Methods	0.863
22.	2023	Marshall Olkin Exponentiated Dagum Distribution: Properties and Applications	Journal of Statistical Theory and Applications	ESCI/Y
23.	2022	Generalized multiple dependent state sampling plans for coefficient of variation	Communications in Statistics - Theory and Methods	0.863
24.	2022	Product Acceptance Determination Based on EWMA Yield Index Using Repetitive and MDS Sampling Schemes	Scientia Iranica	1.435
25.	2022	A New Nonparametric Composite Exponentially Weighted Moving Average Sign Control Chart	Scientia Iranica	1.435
26.	2022	Rehabilitation of Acute and Chronic Ankle Sprain for Male Cricketers through Mixedbag (Hydrotherapy and Land-Based) Exercises	Journal of Bioresource Management	Ŷ
27.	2022	Validity of Ricardian equivalence hypothesis: A case study based on the cluster of developed and developing countries	Journal of Economics	-
28.	2021	Neutrosophic entropy measures for the Weibull distribution: theory and applications	Complex & Intelligent Systems	4.927
29.	2021	Analysis of COVID-19 Data using Neutrosophic Kruskal Wallis H Test	BMC Medical Research Methodology	4.615
30.	2021	A study on various pollutants in water and their effect on blood of the consumers.	Applied Water Science	3.874
31.	2021	A new neutrosophic sign test: An application to COVID-19 data	Plos One	3.420
32.	2021	Development of New Robust Optimal Score Function for the Weibull Distributed Error Term in Multilevel Models	Mathematical Problems in Engineering	1.305
33.	2021	Computing Expectiles using k-Nearest Neighbours Approach	Symmetry	2.713
34.	2021	Monitoring Mortality Caused by Covid-19 using Gamma Distributed Variables Based on Generalized Multiple Dependent State Sampling	Computational and Mathematical Methods in Medicine	2.238
35.	2021	A New Neutrosophic Negative Binomial Distribution: Properties and Applications	Journal of Mathematics	0.971
36.	2021	On the Discrete Weibull Marshall–Olkin Family of Distributions: Properties, Characterizations, and Applications.	axioms	2.6
37.	2021	Efficient Rank-Based Analysis of Multilevel Models for the Family of Skew-t Errors	Pakistan Journal of Statistics and Operations Research	Y
38.	2021	Is Trade Openness the reason of High Energy Demand in China	International Journal of Energy Economics	x
39.	2021	Neutrosophic Entropy Measures for the Normal Distribution: Theory and Applications	Pakistan Journal of Statistics	Ŷ
40.	2021	Knowledge Attitude and Practices in Community Health Programs by the Pharmacists in Lahore, Pakistan	Journal of Pharmaceutical Research International	Ŷ
41.	2021	One Factor SEM and Multilevel SEM Model for Patient Satisfaction Data	Journal of Pharmaceutical Research International	Y
12.	2021	Risk Factors and Quality of Life of Lung Cancer Survivors in Lahore, Pakistan	Journal of Pharmaceutical Research International	Y
43.	2021	Functional Limitations of Hyper and Hypothyroid Patients in INMOL Hospital Lahore, Pakistan	Journal of Pharmaceutical Research International	Ŷ
44.	2021	Hospital Characteristics and the Patient Satisfaction in Lahore, Pakistan	Journal of Pharmaceutical Research International	Y
45.	2021	Moving Average EWMA Chart for the Weibull Distribution	Communication in Statistics- Simulation and Computation	0.651
46.	2021	Transmuted Inverted Kumaraswamy Distribution: Theory and Applications	Punjab University Journal of Mathematics	Y

47.	2021	The Classification of Medicinal Plant Leaves Based on Multispectral and Texture Feature Using Machine Learning Approach	Agronomy	2.603
48.	2021	Monitoring circuit boards products in the presence of indeterminacy	Measurement	3.364
49.	2021	Generalized Multiple Dependent State Sampling Plans for Coefficient of Variation	Communication in Statistics- Theory and Methods	0.612
50.	2021	Efficient Rank Based Analysis of Multilevel Models for the Family of Skew t-distribution	Pakistan Journal of Statistics and Operations Research	Ŷ
51.	2021	The Extended Burr-R Class: Properties, Applications and Modified Test for Censored Data	AIMS Mathematics	0.882
52.	2021	A mixed control chart for monitoring failure times under accelerated hybrid censoring.	Journal of Applied Statistics	0.767
53.	2021	Analysis of SNP rs1800796 Association with Risk of Rheumatoid Arthritis in Pakistani Population: A Case Control Study.	Pakistan J. Zool	0.790
54.	2021	Relations for Moments of Generalized Order Statistics for Transmuted Exponential Distribution and Characterization	Pakistan Journal of Statistics and Operations Research	Y
55.	2021	Neutrosophic Beta Distribution with Properties and Applications	Neutrosophic Sets and Systems	Y
56.	2021	Prevalence of Obesity and Trends of Body Mass Index in Azad Jammu and Kashmir	Journal of Pharmaceutical Research International	Y
57.	2020	A bottleneck degree-based migrating birds optimization algorithm for the PCB production scheduling	IEEE-Access	3.745
58.	2020	Systematic surveillance and meta-analysis on the prevalence of metallo-β- lactamase producers among carbapenem resistant clinical isolates in Pakistan	Journal of Global Antimicrobial Resistance	2.706
59.	2020	A Double Homogeneously Weighted Moving Average Control Chart for Monitoring of the Process Mean.	Qual Reliab Engng Int	1.718
50.	2020	An Improved and Robust Class of Variance Estimator	Scientia Iranica	1.017
51.	2020	A New Nonparametric Composite Exponentially Weighted Moving Average Sign Control Chart	Scientia Iranica	1.017
62.	2020	A new nonparametric double exponentially weighted moving average control chart	Qual Reliab Engng Int	1.718
63.	2020	New Diagnosis Tests under the Neutrosophic Statistics-An Application to Diabetic Patients	BioMed Research International	2.276
64.	2020	COVID-19 in South Asia: Real-time Monitoring of Reproduction and Case Fatality Rate	General Medicine: Open Access	-
65.	2019	The interrelationships of child under-nutrition, ecological and maternal factors: a case study of Pakistan by using composite index of anthropometric failure	Applied Ecology and Environmental Research	0.712
66.	2019	Gender Disparities in Human Development Index and associated factors in Low, Medium, High and Very High Human Developed Countries	Pakistan Economic and Social Review	x
67.	2018	Prevalence of extended-spectrum-β-lactamase – producing Enterobacteriaceae: first systematic meta-analysis report from Pakistan.	Antimicrobial Resistance & Infection Control	4.887
68.	2018	Comparison of European system for cardiac operative risk evaluation (EuroSCORE) II with the postoperative outcomes in patients undergoing cardiac surgery	Journal of Fatima Jinnah Medical University	Y
69.	2017	Application of Panel Co-integration Approach to Verify Ricardian Equivalence Hypothesis in G8 and SAARC Countries	Journal of Statistics	Ŷ
70.	2017	Multilevel Growth Modeling Using R: A Case of GDP Influencing Factors	Journal of Statistics	Y
71.	2017	Optimal Breastfeeding Practices: Mothers' Knowledge and Practices	The Professional Medical Journal	x
72.	2017	Contraceptive Method Choices among Women in Punjab, Pakistan.	Medical Channel	Y
73.	2017	Health Outcomes in Low, Medium, High and Very High Human Developed Countries: A Cross Comparison with the Pakistan	Pakistan Journal of Medical Research	Y
74.	2017	Awareness about Swine Flu/H1N1 Influenza Virus among Educated Community of Lahore: - City of Pakistan	Journal of Pakistan Medical Association	0.573
75.	2017	Correlates of Human Development Index in Low, Medium, High and Very High Human Developed Nations	Pakistan Economic and Social Review	x
76.	2017	Comparison of fractional splines with polynomial splines; An Application on under-five year's child mortality data in Pakistan (1960- 2012)	Pakistan Journal of Statistics & Operation Research	Ŷ

77.	2017	Epidemiological Analysis of Infant Mortality in Rural Punjab of Pakistan	Medical Forum Monthly	Ŷ
//.	2017	1 0 5 5 5 7	, ,	-
		Ordinal Logit and Multilevel Ordinal Logit Models: An Application on	Pakistan Journal of	
78.	2017	Wealth Index MICS-Survey Data	Statistics & Operation	Y
			Research	
		Some Improved Modified Ratio Estimators Based on Decile Mean of an	Pakistan Journal of	
79.	2016	Auxiliary Variable	Statistics & Operation	Y
			Research	
80. 2010		Improved Ratio Estimators for the Population Mean Using Non-	Pakistan Journal of	
	2016	Conventional Measures of Dispersion	Statistics & Operation	Y
		Conventional measures of Dispersion	Research	
			Pakistan Journal of	
81. 2	2016	Correlates of Injection Initiation among Drug Users in Punjab, Pakistan	Medical and Health	Y
			Sciences	
			Pakistan Journal of	
32.	2015	Power Comparison of Various Normality Tests	Statistics & Operation	Y
			Research	
	2015		Caspian Journal of	
33.		Random Intercept and Random Slope 4-Levels Multilevel Models	Applied Scientific	x
			Research	
84.	2014	Structural Modeling of Data on Quality of Life of Breast Cancer Survivors	DORIANA	X
85.	2014	Impact of Macroeconomic Factors on the Stock Index: A Case Study of	Science International	x
o 5 .	2014	Pakistan	Science international	л
			Pakistan Journal of	
86.	2013	Generalization of Random Intercept Multilevel Models	Statistics & Operation	Y
		-	Research	
			European Journal of	a - ac
87.	2013	Random Intercept and Random Slope k-levels Multilevel Models	Scientific Research	0.792
			Caspian Journal of	
88.	2013	Random Intercept and Random Slope 3-Levels Multilevel Models	Applied Scientific	x
			Research	
			Pakistan Journal of	
89.	2012	Random Intercept and Random Slope Multilevel Models	Statistics & Operation	Y
			Research	-
00	2012	Pandom Intercent and Pandom Clone Multimeter Multimet M. 1		v
90.	2012	Random Intercept and Random Slope Multivariate Multilevel Models	Science Series Data Report	X
91.	2008	Anxiety and Self-Esteem among Smokers and Non-smokers	Pakistan Journal of	Ŷ
	2000	marcey and ben-Esteen among binoxets and rom-smokets	Psychology	1

MANUSCRIPTS UNDER REVIEW

S. #	Title of Paper	Name of the Journal	IF/ HEC Cat.
1.	Exploring the Quantum Frontier: Road Accident Prediction Using Quantum Neural Networks and Traditional Machine Learning	Journal of King Saud University - Computer and Information Sciences	7.40
2.	Quantum Neural Networks and Conventional Machine Learning for Human Development Index Prediction	Applied Soft Computing Journal	8.71
3.	Quantum Computing in Finance: Current Status and Future Prospects – A Comprehensive Review	The Journal of Finance and Data Science	6.5
4.	Identification of Crime Patterns in Pakistan by using Data Mining Techniques	Statistical Analysis and Data Mining	2.1
5.	Grover's Algorithm for Astrophysical Data Analysis: A Quantum Circuit Based Approach	SN Computer Science	3.78
6.	Comparative Study of Long Short-Term Memory (LSTM) and Quantum Long Short-Term Memory (QLSTM): Prediction of Stock Market Movement	Soft Computing	3.1
7.	Comparative Analysis of Quantum Error Correction Codes: A Quantum Circuit Based Approach	Quantum Information Processing	2.2

8.	A Quantum Cognition Based Parallel Architecture of Body Sensor Network for Man- Machine Communication in Cancer Management	Pattern Analysis and Applications	3.7
9.	aantum Computing in Healthcare: Current Status and Future Prospects – A PLOSOne		2.9
10.	Comorbidity Chronicles: Meta-Analysis on Prominent Risk Factors in COVID-19	AIMS-Public Health	3.1
11.	Applications of Quantum Computing in Agriculture: Systematic Review and Meta- Analysis Review		10.7
12.	Decision Trees and the Classification of Student Satisfaction by the Punjab University Higher Education		2.3
13.	n Exploration of Knowledge, Attitude and Practices about Monkepox using fachine Learning Techniques		2.9
14.	An Exploration of Nutrition and Health Consciousness among Youth in Pakistan Ising Machine Learning Techniques		2.6
15.	Data Mining of Non-communicable Diseases Indicators in Pakistan and Associated Countries		3.8
16.	mage Classification using Data Mining and Quantum Computing: A systematic Review		3.4
17.	Modeling the Child Well-being using Data Mining Techniques: Evidence from the MICS Surveys Pakistan	Child Indicators Research	2.0
18.	Predictive Modeling of Investment Patterns in Pakistan Using Data Mining and Advanced Machine Learning Algorithms	Computational Economics	1.9
19.	Probing the Accounts of the Reminiscence Bump through Multilevel Modelling	Memory & Cognition	2.502
20.	Meta-analysis of Factors Associated with Disease Burden Estimation of Influenza: Random Effect Model Approach	Influenza and other Respiratory Viruses	2.954
21.	Meta-analysis of Risk Factors Associated with Diabetes in Pakistan: Random Effect Model Approach.	Diabetes	7.273
22.	Machine Vision Approach for The Brain Tumor Classification Using Fused Features	Artificial Intelligence Review	5.942
23.	A Machine Learning Approach for Classification of Liver Tumor Using Magnetic Resonance Images	Scientific Reports	3.998
24.	Relative Risk and Odds Ratios under Uncertainty: Applications to Diabetes Data	European Journal of Clinical Investigation	3.086
25.	Double Progressive Mean Control Chart Under Multiple Dependent State Repetitive Sampling Scheme Using Symmetric Values	Iranian Journal of Science and Technology, Transaction A, Science	0.875
26.	Multilevel Rolling Horizon Planning and Scheduling Integrated with Material Constraints using Drum Buffer Rope Approach: A Heuristic for Smart Manufacturing	CIRP Journal of Manufacturing Science and Technology	2.991
27.	A Co-Relational Study of Teachers' Conceptions of Assessment and Students' Academic Achievement	Journal of Educational Research	W
28.	Performance of the New Modified Random Forest for the Classification of Binary Datasets with Multiple Kernel Learning	Pakistan Journal of Statistics and Operation Research	Ŷ
29.	A Group Chain Acceptance Sampling Plans for Lifetimes Following Beta Burr Type-X Distribution with Minimum Angle Approach	Industrial Engineering & Management Systems	Y
30.	Transmuted Exponentiated Dagum Distribution: Properties and Applications	Boletín de la Sociedad Matemática Mexicana	-
31.	Modified Double EWMA Chart Using Multiple Dependent State Repetitive Sampling	Heliyon	0.432
32.	Comparison of score selection schemes for optimal rank-based score functions under multilevel models	Statistical Methods & Applications	0.614
33.	Sampling Plan Based on the Coefficient of Variation for Resubmitted lots	Proceedings of the National Academy of Sciences, India Section A: Physical Sciences	0.921

34.	Variables Control Chart Using Lifetime-Performance Index Under Weibull Distributions with Censoring	Scientia Iranica	1.017
35.	Multiple Dependent Repetitive Group Sampling Plan using Marshall-Olkin Logistic-Exponential Distribution Affirming to Percentile Lifetime	Stat	0.766

PUBLICATIONS IN CONFERENCE PROCEEDINGS

S. #	Year	Title	Name of Publisher & Address
1	2010	An Assessment of Quality of Life Among Breast Cancer Survivors in Punjab Using Ordinal Regression	Proceedings of Journal of American Statistical Association (JASA), USA
2	2009	Leadership Behavior: A Comparative Study of Multiple Regression and the Multilevel Regression	Proceedings of Journal of American Statistical Association (JASA), USA
3	2008	Risk Factors Associated with injection initiation among drug users: Comparing Hierarchical Modeling with Traditional Logistic Regression	Proceedings of Journal of American Statistical Association (JASA), USA
4	2006	Multivariate Statistical Analysis in Modeling the Job Satisfaction Data	College of Statistical and Actuarial Sciences University of the Punjab, Pakistan
5	2006	Transformation of Random Variables: A Comparison of Exterior Product Method with the usual Determinant Method for Computing Jacobian of Transformation	College of Statistical and Actuarial Sciences University of the Punjab, Pakistan.

BOOKS AND CHAPTERS

S. #	Year	Title	Book/Cha pter	Publisher	Status
1.	2025	Quantitative Reasoning II	Text Book	ILMI, Lahore	Published
2.	2024	Quantitative Reasoning I	Text Book	ILMI, Lahore	Published
3.	2023	Neutrosophic statistics and the medical data: a systematic review	Chapter 19	Springer	Published
4.	2021-22	Process Capability Indices under Advanced Sampling Plans	Book	Springer	Under Process
5.	2022	Neutrosophic Statistics and the Medical Data: A Systematic Review	Chapter	Springer	Published
6.	2021	Neutrosophic Normal Probability Distribution—A Spine of Parametric Neutrosophic Statistical Tests: Properties and Applications	Chapter	Springer	Published
7.	2021	Neutrosophic Statistics for Grouped Data: Theory and Applications	Chapter	Springer	Published
8.	2020	Product Acceptance Determination Using Similarity Measure Index under Neutrosophic Statistics	Chapter	NOVA	Published
9.	2020	"Neutrosophic Descriptive Statistics" for book "Quadruple Neutrosophic Theories and Applications"	Chapter	NOVA	Published
10.	2016	Practical Notebook Statistics (B.A & BSc-Part-II)	Practical Notebook	ILMI Kitab Khana, Pakistan	Under Review
11.	2016	Practical Notebook Statistics (B.A & BSc-Part-1)	Practical Notebook	ILMI Kitab Khana, Pakistan	Published
12.	2015	Practical Notebook Statistics (Class-11)	Practical Notebook	ILMI Kitab Khana, Pakistan	Published
13.	2015	Practical Notebook Statistics (Class-12)	Practical Notebook	ILMI Kitab Khana, Pakistan	Published

COMPUTING SKILLS

- ◎ Proficient in Statistical Software (SPSS, AMOS, Smart PLS, LISREL, STATA & MLwin).
- Proficient in Data Mining Software (SPSS Modeler, Orange Data Mining, KNIME, Rattle).
- Proficient in Microsoft Office (EXCEL, WORD & PowerPoint).
- ◎ Strong programming Skills (SPSS, FORTRAN, SAS, Python & R).
- ◎ Hands-on practice on C Language.

EDUCATION

University of the Punjab, Lahore – Pakistan	2013
Ph.D. in Statistics: Generalization of Multilevel Models and their Applications.	
University of the Punjab, Lahore – Pakistan	2004
M.Sc. in Statistics: Multivariate Analysis, FORTRAN 77, C++, and Econometrics.	
University of the Punjab, Lahore – Pakistan	2001
B.Sc.: Statistics, Mathematics, and Economics.	
Board of Intermediate and Secondary Education, Lahore – Pakistan	1999
Higher Secondary Certificate (FA): Statistics, Mathematics, and Economics.	
Board of Intermediate and Secondary Education, Lahore – Pakistan	1997
Secondary Certificate (Matriculation): Physics, Chemistry, and Biology.	

REFERENCES

The references will be furnished when required.