Dr. Abdel-Salam G. Abdel-Salam

Head of Student Data Management Section, Student Experience, Student Affairs Sector, VPSA Office.

Department of Mathematics, Statistics and Physics

College of Arts and Science

Qatar University, P.O.Box: 2713 - Doha, Qatar.

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Academic Background

Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, VA.

• PhD, Department of Statistics, December 2009.

Dissertation: "Profile Monitoring with Fixed and Random Effects using Nonparametric and Semiparametric Methods"

Advisor: Dr. Jeffrey B. Birch

• MS, Department of Statistics, Virginia Tech, December 2006.

Cairo University, Economics and Political Science,

Giza, Egypt.

• MS in Operations Research, Department of Statistics, May 2004.

Thesis: "Selection of Variables in Discriminant Analysis using Mathematical Programming Approach with an Environmental Application"

Advisors: Dr. Ramadan Hamed and Dr. Ali El-Hefnawy

• BS in Statistics with Minor in Economics, May 1998.

Licensures & Certifications

- Accredited Professional Statistician (PStat), American Statistical Association, USA. (October 2018).
- Chartered Statistician (CStat), The Royal Statistical Society, UK. (April 2018).

Research Interests

Economic Capital Models, Regression Analysis, Mixed Models, Nonparametric and Semiparametric Regression, Exploratory and Robust Data Analysis, Profile Monitoring, Biostatistics, Quality Control, Quality Improvement, Industrial and Medical Applications, Operations Research, Multivariate Analysis, Health-related monitoring and prospective public health surveillance.

Professional Experience

Associate Professor of Statistics in the Department of Mathematics, Statistics, and Physics, College of Arts and Sciences, Qatar University, Doha, Qatar. October 2019 - Present

Head of Student Data Management Section, Student Affairs Sector, Vice President for Student Affairs, Qatar University, Doha, Qatar.

November 2018 - Present

Coordinator of the Statistical Consulting Unit, College of Arts and Sciences, Qatar University, Doha, Qatar.

September 2014 - 2019

Coordinator of the Statistics BS and MS Programs, College of Arts and Sciences, Qatar University, Doha, Qatar.

October 2015 - November 2018

Assistant Professor in the Department of Mathematics, Statistics, and Physics, College of Arts and Sciences, Qatar University, Doha, Qatar.

September 2013 - Present

Assistant Vice President, Mortgage Banking-Modeling and Forecasting, JPMorgan Chase & Co., 1111 Polaris Parkway, Columbus, Ohio. November 2012 - August 2013

Assistant Vice President, Business Banking Risk Management, JPMorgan Chase & Co., 1111 Polaris Parkway, Columbus, Ohio. January 2011 - November 2012

Visiting Assistant Professor in the Department of Statistics in Oklahoma State University, Oklahoma.

August 2010 - January 2011

Assistant Professor in the Department of Statistics at the Faculty of Economics and Political Science, Cairo University, Giza, Egypt.

May 2010 (On Leave)

Instructor in the Department of Statistics in Virginia Polytechnic Institute and State University, Virginia.
January 2010 - May 2010

Teaching Assistant in the Department of Statistics in Virginia Polytechnic Institute and State University, Virginia.

August 2005 - December 2009

Assistant Lecturer in the Faculty of Economics and Political Science, Cairo University, Giza, Egypt.

August 1998 - August 2005

Publications

Refereed Journal Articles:

Sara, H. N., **Abdel-Salam G. Abdel-Salam** (2021), Semiparametric MEWMA for Phase II profile monitoring, *Quality and Reliability Engineering International*. http://dx.doi.org/10.1002/qre.2829

Abdrabo Soliman, **Abdel-Salam G. Abdel-Salam** and Mervat Ahmed (2021), The Reliability, Validity and Normative Scores of the Bene-Anthony Family Relations Test for Use With Arab Children, *Front Psychology*. doi: 10.3389/fpsyg.2021.548493

Ryad Ghanam, Edward L. Boone **Abdel-Salam G. Abdel-Salam** (2021), SEIRD Model for Qatar COVID-19 Outbreak, *Letters in Biomathematics*, 8 (1), 19–28.

Bandara, K., **Abdel-Salam G. Abdel-Salam** and Birch, J. B. (2020), Model robust profile monitoring for the generalized linear mixed model for Phase I analysis, *Applied Stochastic Models in Business and Industry*, 6, 1037-1059.

Ufuk Beyaztas and **Abdel-Salam G. Abdel-Salam** (2020), Stationary Bootstrap Based Multi-Step Forecasts for Unrestricted VAR Models, *Journal of Data Science*, 18, 682-696.

Jones, C. L., **Abdel-Salam G. Abdel-Salam** and Mays, D. A. (2020), Practitioners guide on parametric, nonparametric, and semiparametric profile monitoring, *Quality and Reliability Engineering International*. https://doi.org/10.1002/qre.2770

Ufuk Beyaztas, Han Lin Shang and **Abdel-Salam G. Abdel-Salam** (2020), Functional linear models for interval-valued data, *Communications in Statistics-Simulation and Computation*, DOI: 10.1080/03610918.2020.1714662

Abdel-Salam G. Abdel-Salam, Mollazehi, M., Bandyopadhyay, D., Malki, A. M., Shi, Z. and Zayed, H. (2020), Assessment of lung cancer risk factors and mortality in Qatar: A case series study, *Cancer Reports*, e1302.

Azevedo, D. R., Bandyopadhyay, D., Prates, M. O., **Abdel-Salam G. Abdel-Salam** and Garcia, D. (2020), Assessing spatial confounding in cancer disease mapping using R, *Cancer Reports*, e1263.

- Shi, Z., Malki, A., **Abdel-Salam G. Abdel-Salam**, Jianghong Liu and Hatem Zayed (2020), Association between Soft Drink Consumption and Aggressive Behaviour among a Quarter Million Adolescents from 64 Countries Based on the Global School-Based Student Health Survey (GSHS), *Nutrients*, 12, 694. https://doi.org/10.3390/nu12030694
- A. Khan, S. Cheema, Z. Hussain and **Abdel-Salam G. Abdel-Salam** (2020), Measuring skewness: we don not assume much , *Scientia Iranica*.
- Zainab Siddiqui and **Abdel-Salam G. Abdel-Salam** (2019), A Semi-Parametric Profile Monitoring via Residuals, *Quality and Reliability Engineering International*, 35, 959-977.
- Sepehr Piri, **Abdel-Salam G. Abdel-Salam** and Edward Boone (2019), A Wavelet Approach for Profile Monitoring of Poisson Distribution With Application, *Communications in Statistics Simulation and Computation*, 4, 1-12.
- **Abdel-Salam G. Abdel-Salam** and Jeffrey B. Birch (2019), A semiparametric Nonlinear Mixed Model Approach to Phase I Profile Monitoring, *Communications in Statistics Simulation and Computation*, 48, 1677-1693.
- Hamada, Basyouni I., **Abdel-Salam G. Abdel-Salam** and ElKilany, ElSayed A. (2019), Press freedom and corruption: An examination of the relationship, *Global Media and Communication*, https://doi.org/10.1177/1742766519871676
- Saddam Abbasi, Tahir Abbas, Muhammad Riaz and **Abdel-Salam G. Abdel-Salam** (2018), Bayesian Monitoring of Linear Profiles Using Bayesian DEWMA Control Structures with Random X, IEEE Access, 6, 78370-78385.
- Soliman, H. H., Koran, J. and **Abdel-Salam G. Abdel-Salam** (2018), Parents' perception of school violence, awareness of risk factors, and school safety: An Ecological Perspective, *International Journal of School Social Work*, 3, 1-25.
- **Abdel-Salam G. Abdel-Salam**, Mahjabeen Ramzan, and Zainab Siddiqui (2018), Statistical Analysis for the Impact of Smoking on the Behavior and Health of Qatari Adolescents, *International Journal of Adolescent Medicine and Health (IJAMH)*, DOI: https://doi.org/10.1515/ijamh-2018-0045.
- Hassan Aziz, **Abdel-Salam G. Abdel-Salam**, Al-Obaide MAI, Alobydi HW and Al-Humaish S (2018), Kynurenine 3-Monooxygenase Gene Associated With Nicotine Initiation and Addiction: Analysis of Novel Regulatory Features at 5' and 3' Regions, *Front. Genet.* doi: 10.3389/fgene.2018.00198
- Monica Zolezzia, Oraib Abdallaha, Nadir Kheira and **Abdel-Salam G. Abdel-Salam** (2018), Evaluation of community pharmacists' preparedness for the provision of cardiovascular disease risk assessment and management services: A study with simulated patients in Qatar, *Research in Social and Administrative Pharmacy*. Doi: 10.1016/j.sapharm.2018.04.032
- Al-Obaide MAI, Ibrahim BA, Al-Humaish S, and **Abdel-Salam G. Abdel-Salam** (2018), Genomic and Bioinformatics Approaches for Analysis of Genes Associated With Cancer Risks Following Exposure to Tobacco Smoking. *Front. Public Health*, 6:84. doi: 10.3389/fpubh.2018.00084
- Mohammed A. Al-Obaide, Buthainah A. Ibrahim, Saif Al-Humaish and **Abdel-Salam G. Abdel-Salam** (2018), Genomic and Bioinformatics Approaches for Analysis of Genes Associated With Cancer Risks Following Exposure to Tobacco Smoking, *Front. Public Health*. https://doi.org/10.3389/fpubh.2018.00084

- Hassan A. Aziz and **Abdel-Salam G. Abdel-Salam** (2017), Coronary Heart Disease Risk Factors among University Female Students, *Quality in Primary Care*, 25, pp. 229-234.
- **Abdel-Salam G. Abdel-Salam**, Mohammad D. M., Ibrahim A. E., Yousuf A. D., Irfan J. I. and Salman U. (2017), Testing the Consistency of a Novel Bowling Scoring System Against the Current Approach, *Communication in Mathematical Modeling and Applications*, 2, 23-38.
- Amjad M. Shraim, Duna A. Alenazi, **Abdel-Salam G. Abdel-Salam**, Prashant Kumar (2016), Loading Rates of Dust and Metals in Residential Houses of Arid and Dry Climatic Regions, *Aerosol and Air Quality Research*, 16, 2462-2473.
- **Abdel-Salam G. Abdel-Salam**, Mohammed A. Al-Obaide and Hytham Alobydi (2016), Statistical and Bioinformatics Analysis of 5'-regulatory Region of TM4SF1 Locus Involved in Cancer and Drug Resistance, $Sci-Afric\ Journal\ of\ Scientific\ Issues,\ Research\ and\ Essays,\ 4,\ 913-918.$
- Mohammed A. Al-Obaide, **Abdel-Salam G. Abdel-Salam**, Hytham Alobydi and Kalkunte S. Srivenugopal (2016), Bioinformatic Analysis of Human OPN3 Alternative Promoters Associated with Cancer, *Appl. Math. Inf. Sci.*, 10, 1223-1229.
- **Abdel-Salam G. Abdel-Salam** and Jeffrey B. Birch (2015), Robust Techniques for Phase I Profile Monitoring. In *JSM Proceedings, Quality and Productivity Section*. Seattle, WA: American Statistical Association. 1104-1118.
- Mohannad G. Al-Saghir and **Abdel-Salam G. Abdel-Salam** (2015), Genetic Diversity of Peanut (Arachis hypogea L.) Cultivars as Revealed by RAPD Markers, *American Journal of Plant Sciences*, 6, 2303-2308.
- Al-Obaide, M. A., Alobydi, H., **Abdel-Salam G. Abdel-Salam**, Zhang, R., Srivenugopal, K. S. (2015), Multifaceted Roles of 5'-Regulatory Region of the Cancer Associated Gene B4GALT1 and its Comparison with the Gene Family, *International Journal of Oncology*, 47, 1393-1404.
- James D. Williams, Jeffrey B. Birch and **Abdel-Salam G. Abdel-Salam** (2015), Outlier Robust Nonlinear Mixed Model Estimation, *Statistics in Medicine*, 34, 1304-1316.
- Waterman, Jeffrey B. Birch and **Abdel-Salam G. Abdel-Salam** (2015), Several Nonparametric and Semiparametric Approaches to Linear Mixed Model Regression, *Journal of Statistical Computation and Simulation*, 85, 956-977.
- Mohamed A. Alobaide, **Abdel-Salam G. Abdel-Salam**, Hytham Alobydi, Kakil I. Rasul, Ruiwen Zhang and Kalkunte S. Srivenugopal (2014), Characterization of Regulatory Sequences in Alternative Promoters of Hypermethylated Genes Associated with Tumor Resistance to Cisplatin, *Molecular and Clinical Oncology*, 3, 408-414.
- **Abdel-Salam G. Abdel-Salam**, Jeffrey B. Birch, and Willis A. Jensen (2013), A Semiparametric Mixed Model Approach to Phase I Profile Monitoring, *Quality and Reliability Engineering International*, 29, 555-569.
- Nesma A. Saleh, Mahmoud A. Mahmoud, **Abdel-Salam G. Abdel-Salam** (2013), The Performance of the Adaptive Exponentially Weighted Moving Average Control Chart with Estimated Parameters, *Quality and Reliability Engineering International*, 29, 595-606.
- Ihab El-Shawarby, **Abdel-Salam G. Abdel-Salam**, Huan Li, and Hesham Rakha (2012), Driver Behavior at the Onset of Yellow Indication for Rainy/Wet Roadway Surface Conditions, *Journal of the Transportation Research Board*, 2012-1-22.

M.G.Al-Saghir, Liesta Walker and **Abdel-Salam G. Abdel-Salam** (2012), Determining the Degree to Which Students Meet the Learned Goal Objectives in Microbiology through the Utilization of Pre and Post Testing Mechanisms, *International Journal of Microbiological Research*, 3, 192-194.

M.G.Al-Saghir and **Abdel-Salam G. Abdel-Salam** (2011), Genetic Diversity in North American Soybean (Glycine Max L.) Cultivars as Revealed by RAPD Markers, *Journal of Plant Sciences*, 6, 36-42.

Ihab El-Shawarby, Ahmed Amer, **Abdel-Salam G. Abdel-Salam**, and Hesham Rakha (2011), Empirical Study of Yellow and Red Light Running Behavior on High-Speed Signalized Intersection Approaches, *Operations and Traffic Management-OPS: Journal of the Transportation Research Board*, No. 2075, Transportation Research Board of the National Academies, Washington, D.C., 2011. http://amonline.trb.org/12kf39/1

Rakha, H., Arafeh M., **Abdel-Salam G. Abdel-Salam**, and Medina Flintsch A. (2009), Linear Regression Crash Prediction Models: Issues and Proposed Solutions, *Efficient Transportation and Pavement Systems*, Taylor & Francis group, ISBN 978-0-415-48979-9, 241-256.

William H. Woodall, J. Brooke Marshall, Michael D. Joner, Shannon E.Fraker, and **Abdel-Salam** G. **Abdel-Salam** (2008), On The Use Of Scan Methods In Prospective Public Health Surveillance, *Journal of the Royal Statistical Society, Series A*, 171, 223-237.

Medina Flintsch, A., Rakha, H., Arafeh, M., Dua, D., **Abdel-Salam G. Abdel-Salam**, and Abbas, M. (2008), Safety Impacts of Access Control Standards on Crossroads in the Vicinity of Highway Interchanges, *Transportation Research Record: Journal of the Transportation Research Board*, No. 2075, Transportation Research Board of the National Academies, Washington, D.C., 2008, 42-52.

Books/Chapter(s):

- J.P. Verma and **Abdel-Salam G. Abdel-Salam** (2019), "Testing Statistical Assumptions in Research", Wiley, USA, ISBN-13: 978-1119528418 (Hand Book), ISBN-10: 1119528410 (Electronic Book).
- Rakha H., Arafeh M., **Abdel-Salam G. Abdel-Salam**, Guo F., and Medina (2008), "Linear Regression Crash Prediction Models: Issues and Proposed Solutions," *Efficient Transportation and Pavement Systems: Characterization, Mechanisms, Simulation and Modeling* (Editors: Al-Qadi, Sayed, Alnuaimi, and Masad), Taylor and Francis, ISBN: 978-0-415-48979-9 (Hand Book), ISBN: 978-0-203-88120-0 (Electronic Book), 241-256.

Conference Proceedings:

Abdel-Salam G. Abdel-Salam and Jeffrey B. Birch (2015), Robust Techniques for Phase I Profile Monitoring. In *JSM Proceedings, Quality and Productivity Section*. Seattle, WA: American Statistical Association. pp. 1104-1118.

Al-Obaide M.A. Hytham Alobydi, **Abdel-Salam G. Abdel-Salam**, Ruiwen Zhang, Kalkunte S. Srivenugopal, 2015. Proceedings of AACR Annual meeting 2015.

Abdel-Salam G. Abdel-Salam, Ramadan Hamed and Ali El-Hefnawy (2004), Mathematical Programming Approach for Variable Selection in Discriminant Analysis: an Environmental Application, 39th Annual Conference on Statistics, Computer Sciences and Operation Research, Institute of Statistical Studies And Research, Cairo University, Giza, Egypt, pp. 80-94.

Abdel-Salam G. Abdel-Salam, Ramadan Hamed and Ali El-Hefnawy (2003), Selection of Vari-

ables in Discriminant Analysis Using Mathematical Programming Approach, 38th Annual Conference on Statistics, Computer Sciences and Operation Research, Institute of Statistical Studies And Research, Cairo University, Giza, Egypt, pp. 115-131.

Technical Reports:

Megan J. Waterman, Jeffrey B. Birch, and **Abdel-Salam G. Abdel-Salam** (2012), Nonparametric and Semiparametric Linear Mixed Models, Technical Report,

 $http://www.web-e.stat.vt.edu/dept/web-e/tech_reports/Technical_Report_12-4.pdf$

Abdel-Salam G. Abdel-Salam, Jeffrey B. Birch, and Willis A. Jensen (2010), Nonparametric and Semiparametric Methods for Phase I Profile Monitoring, Technical Report, $http://www.web-e.stat.vt.edu/dept/web-e/tech_reports/Technical_Report_10-2.pdf$

Rakha, H., Medina Flintsch A., Arafeh, M., **Abdel-Salam G. Abdel-Salam**, Dua, D., and Abbas, M., Access Control Design on Highway Interchanges, *submitted to Virginia Transportation Research Council (VTRC 08-CR7)*.

Papers Submitted for Publication/ Work in Progress:

Abdel-Salam G. Abdel-Salam, and et.al (2021), Bayesian EWMA and CUSUM Control Charts Under Different Loss Functions. (Submitted).

Abdel-Salam G. Abdel-Salam, and et.al (2021), NLM Profile Monitoring Using Residuals. (In Progress).

Abdel-Salam G. Abdel-Salam (2021), Generalized Non-linear Mixed Model Robust Regression for Residuals, *In Progress*.

Abdel-Salam G. Abdel-Salam and *et.al.* (2021), Cardiac Surgery Performance Monitoring via the Control Charts, *In Progress*.

Courses Taught

Introductory Statistics, Applied Statistics, Engineering Statistics, Statistical Methods I for Social Sciences, Statistical Methods I, Mathematical Programming, Operations Research, Statistics for Economics, Mathematical Analysis, Stochastic Process, Time Series, Game Theory, Linear Algebra, Econometrics, Linear Models, Regression Analysis, Biostatistics, Introduction to Quality Control, Biological Statistics I & II, Statistics I and Applied Multivariate Analysis.

Honors and Awards

- Academic and Teaching Excellence Award, College of Arts and Sciences, Qatar University, Doha, Qatar.
 2018/2019.
- Qatar University's Outstanding Faculty Service Award , Qatar University, Qatar, Doha, Qatar.
 2017/2018.
- Outstanding Programs' Coordinator Award, College of Arts and Sciences, Qatar University, Doha, Qatar.
 2016/2017.
- Best Presentation Award, International Conference on Pure and Applied Sciences, Yildiz Technical University, Istanbul, Turkey.

 June, 2016.
- The Cairo University Award for international publication, Cairo University, Giza, Egypt. 2014.

- Jesse C. Arnold Award for Teaching Excellence, given for superior teaching by a teaching assistant, Department of Statistics, Virginia Polytechnic Institute and State University, Virginia, USA.
 2008-2009.
- Richard A. Freund International Scholarship from American Society for Quality (ASQ)-USA, for outstanding graduate study of the theory and application of Quality Control, Quality Assurance, Quality Improvement, and Total Quality Management.
 2009.
- Mary G. Natrella Scholarship from Quality and Productivity Section of ASA-USA, for demonstrating interest in Quality applications as evidenced by course work, research topic, and prior work experience.
 2008.
- Best student paper presentation award in Virginia Academy of Science, 86th Annual Meeting, Hampton University, Hampton, Virginia, USA.
 May 21-23, 2008.
- Graduate School's Featured Graduate Student for February 2008, Virginia Tech, Virginia, USA.

 2008.
- Graduate Teaching Assistantship, Department of Statistics, Virginia Tech, Virginia, USA. 2005-2009.
- Undergraduate Academic Excellence Award, for an outstanding undergraduate student,
 College of Economics and Political Science, Cairo University, Egypt.
 1994-1998.
- Academic Excellence Award from "Suez Canal Bank", College of Economics and Political Science, Cairo University, Egypt.
 1997.
- Project Title "Cultural adaptation and Validation of MOCA (Arabic version) to MoCA- Middle East", MRC-01-20-1118, HMC, ABHATH, Qatar.
 Role: Co-Lead Principle Investigator Budget: 100,000.

 2021/2022.
- Project Title "A Novel Technique for Variable Selection with the Presence of Missing Data in Eco-efficiency of the Aviation Industry", QUST-1-CAS-2021-15, Qatar University Fund, Qatar.

Role: Principle Investigator Budget: 13,525. Spring 2021.

Project Title "Data-driven Approach for Modeling the Factors Affecting the University Image", National Capacity Building, QUCP - CAS - 2020 - 2, Qatar University Fund, Qatar.

Role: Co-Lead Principle Investigator Budget: QR 136,000. 2019/2021.

- Project Title "Phase II Non-Parametric And Semi-Parametric Profile Monitoring With Applications", QUST-2-CAS-2020-15, Qatar University Fund, Qatar.
 Role: Principle Investigator Budget: 14,000.

 Fall 2020.
- Project Title "Assessing the Impact of Introducing Value Added Tax on Price Levels and Consumers' Behavior in Qatar", UREP No.: UREP24-059-5-011, Qatar National Research Fund, Qatar.

Role: Principle Investigator Budget: \$18,900. 2019/2020.

• Project Title "Institutions introducing Islam to communities in the State of Qatar, challenges of reality and future prospects", Collaborative Research, QUCG – CSIS – 20/21 – 3, Qatar University Fund, Qatar.

Grants:

Role: Principle Investigator Budget: QR 153,900. 2019/2020.

• Project Title "Statistical Modeling for Effect of Several Treatments on Lung Cancer Patients Surviving Time: Case Study of Qatar",

QUST - 1 - CAS - 2019 - 1, Graduate Grant, Qatar University, Qatar.

Role: Lead Principle Investigator Budget: QR14,000.

2018/2019.

Project Title "Semi-Parametric Profile Monitoring for Residuals",
 QUST - 1 - CAS - 2018 - 1, Graduate Grant, Qatar University, Qatar.
 Role: Lead Principle Investigator Budget: QR13,000.

2017/2018.

- Project Title "Cardiac Surgery Performance Monitoring via the Control Charts", UREP No.: UREP20-070-1-015, Qatar National Research Fund, Qatar.
 Role: Lead Principle Investigator Budget: \$25,700.
 2017/2018.
- Project Title "Factors that Influence Qatari Family Stability: Testing Vulnerability and Resiliency Models", QNRF-DIFI OSRA No.: OSRA2-0209-17021, Qatar National Research Fund, Qatar. Role: Principle Investigator Budget: \$50,000.
 2017/2018.
- Project Title "Discovery and Development of Diterpene-based Anticancer Agents", Qatar University Fund, Qatar.

Role: Co-Lead Principle Investigator Budget: QR 150,000.

2016/2017.

• Project Title "Statistical and bioinformatic analysis of novel genes associated with tobacco smoking behavior towards identification of novel avenues for personalized medicine", QUUG-CAS-BSD-156-16, Qatar University Fund, Qatar.

Role: Principle Investigator Budget: QR 120,000.

2015/2016.

- Project Title "International Conference on Bioinformatics and Biostatistics Applications in Cancer Genomics Research", CWSP3-C-0415-14049, Qatar National Research Fund, Qatar. Role: Lead Principle Investigator Budget: \$71,250.
 2014/2015.
- Project Title "Addressing Attitudes To Water Consumption In Water-challenged Societies: Case Study Of Doha Qatar", UREP No.: 16-093-2-025, Qatar National Research Fund, Qatar. Role: Principle Investigator Budget: \$53,968.
 2014/2015.
- Qatar University start-up grant, Qatar University, Qatar.

2014/2015.

Academic Experience

Qatar University,

Doha, Qatar

• Associate Professor

October 2019 - Present

Teaching undergraduate and graduate courses, advising students, and Head of Student Data Management, Student Experience, Student Affairs Sector, VPSA Office.

• Assistant Professor

September 2013 - October 2019

Teaching undergraduate and graduate courses, advising students, and coordinating the Statistical Consulting Unit.

Oklahoma State University,

Stillwater, Oklahoma

• Visiting Assistant Professor

August 2010 - January 2011

Taught three graduate and undergraduate courses: Engineering Statistics, Statistical Methods I for Social Sciences, and Statistical Methods I.

Virginia Tech,

Blacksburg, Virginia.

• Instructor

January 2010 - May 2010

Taught "'Biological Statistics I & II"', three section for undergraduate students. One of them had over 100 students.

• Graduate Student

August 2005 - December 2009

Included PhD research, PhD and Masters level coursework, research/Senior Statistician for consulting projects and Instructor for STAT 3615 and STAT 3616 "Biological Statistics I & II".

• Graduate Research Assistant

January 2008 - December 2008

Statistician for quality control and quality assurance, Department of Civil and Environmental Engineering.

• Senior Statistician

Summer 2007 - 2009

Virginia Tech Transportation Institute (VTTI) quantified the safety impact associated with access control spacing along arterial crossroads in the vicinity of freeway interchanges. The report of this study was introduced to Virginia Transportation Research Council.

Cairo University,

Giza, Egypt.

• Assistant Professor

May 2010 (On Leave)

Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.

 $\bullet \ \ Assistant \ \ Lecturer/Teaching \ \ Assistant$

1998-200

Statistics Department, Faculty of Economics and Political Science, Cairo University, Egypt.

• Research Assistant

1996-2002

Public Administration Research & Consultation Center, Department of Public Administration.

Consulting Experience

Qatar University

Coordinator of the Statistical Consulting Unit

February 2014 - Present

• Consulted with more than 250 research clients from the following departments: Biological and Environmental Sciences, Biomedical Sciences, Health Sciences, Mass Communication, Social Sciences, Sport Science and Foundation program.

JPMorgan Chase & Co.

Assistant Vice President

January 2011 - December 2013

- Develop economic capital models for the home mortgage business to identify the level of capital needed to ensure that the entity continues to operate even in the event of an extreme economic environment, considering all possible events that may result in adverse influences on the mortgage business.
- Implement advanced statistical/economic analysis, including statistical and financial models, to evaluate the performance of different business segment relationships. Extract and manipulate large data sets using SAS programming.
- Perform multi-stage regression models with various risk levels to forecast the criticized, non-accrual, and charge offs in commercial portfolios based on internal rating information PD (probability of default), EAD, UAD, and LGD (loss given default). Construct the datasets for modeling by manipulating data from various sources with more than 2 million observations.

Develop a set of SAS MACRO programs for historical data constructing, model estimation, and forecasting. Examine the model performance by back-testing. Write reports illustrating the methodology, procedures of model implementation, and results of forecasting and back-testing.

- Support the stress test by providing the forecasts under baseline and stress scenarios. Involve in consumer loan roll rate model validation.
- Leverage cumulative default/prepay models to analyze performance of subprime graded portfolio under various economic scenarios. Write portfolio performance analysis monthly report and deliver/present to senior management of finance, treasury and other department. Write the Basel II documentation (PD, LGD, EAD, and UAD).

Senior Consultant

Virginia Tech, Laboratory for Interdisciplinary Statistical Analysis August 2006 - May 2010

- Consulted with 120 research clients from the following departments: Industrial System Engineering, Biomedical Engineering, Biology, Chemical Engineering, Horticulture, Forestry and Fisheries & Wildlife.
- The techniques used include experimental design, multiple linear regression, logistic regression, ordinal regression, multivariate analysis, ANOVA, mixed models, regression power analysis, sequential testing, quality control, response surface methods, and probability modeling. Additional duties included organizing meetings and mentoring Associate Consultants.

Relevant Coursework

Quality Control Methods, Advanced Quality Control Methods, Experimental Design, Response Surface Methods, Applied Reliability, Statistical Computing, Statistical Methods and Theory, Linear Models, Regression and Advanced Regression, Mixed Models, Generalized Linear Models, Multivariate Statistics, Exploratory Data Analysis, Operations Research, Stochastic Processes, Statistical Consulting.

Conference Presentations/Posters

- Evaluating the Online Teaching Experience at Higher Education Institutes from Students' Perspective, *Invited Speaker*, Education, Engineering Education and Instruction Technology Conference (EEEITC 21), QU, Qatar. **February 2021**.
- Novel Nonparametric and Semiparametric Control Charts Utilizing Residuals, *Invited Speaker*, 36th Quality and Productivity Research Conference, American University in Washington D.C., USA, June 2019.
- Fitting Models to Continuous and Binary Responses With Applications, *Invited Speaker*, Minitab Insights Conference 2018, Scottsdale, AZ, USA. **September2018**.
- Model Robust Profile Monitoring for Generalized LM Model for Phase I Analysis, Keynote Speaker, 6th International Conference on Biostatistics and Bioinfromatics, Atlanta, USA. November 2017.
- Testing the Consistency of a Novel Bowling Scoring System Against the Current Approach, Keynote Speaker, International Conference on Applied Analysis and Mathematical Modeling (ICAAMM-2017), Istanbul, Turkey. **July 2017**.
- Novel Semiparametric Control Charts for Phase I Profile Monitoring via the LM Model Residuals, *Invited talk*, 10th ICSA (International Chinese Statistical Association), Shanghai, China. **December 2016**.
- Statistical and bioinformatics analysis for cancer and drug resistance, *Invited talk*, Genomics & Systems Biology VI symposium, New York University Research Institute and Center for Genomics and Systems Biology, Abu Dhabi, United Arab Emirates. February 2016.

- Statistical and bioinformatics analysis of 5'-regulatory region of TM4SF1 locus involved in cancer and drug resistance, *Invited talk*, 5th International Conference on Mathematics and Information Sciences, Zewail City of Science and Technology, Egypt. **February 2016**.
- Outlier Robust Nonlinear Mixed Model Estimation on Gene Expression II, Invited talk, 4th
 International Conference and Exhibition on Biometrics Biostatistics, San Antonio, TX, USA.
 November 2015.
- Robust Techniques for Phase I Profile Monitoring, Contributed talk, The Joint Statistical Meetings 2015 (JSM2015), Seattle, WA, USA. August 2015.
- Outlier Robust Nonlinear Mixed Model Estimation on Gene Expression, *Contributed talk*, European Meeting of Statisticians 2015 (EMS2015), Amsterdam, Netherlands. **July 2015**.
- Epidemiological Characteristics of Lung Cancer in the State of Qatar, Poster, International Conference on on Bioinformatics and Biostatistics Applications in Cancer Genomics Research (BBACGR 2015), Qatar University, Doha, State of Qatar. (Collaborating with others).
 April 2015.
- Structural features of alternative promoters of cisplatin resistance genes, *Poster*, BBACGR-2015, Qatar University, Doha, State of Qatar. (Collaborating with others). **April 2015**.
- Bioinformatic analysis of O⁶-methylguanine-DNA methyltransferase (MGMT) regulatory region, Poster, BBACGR-2015, Qatar University, Doha, State of Qatar. (Collaborating with others).
 April 2015.
- Characterization of a Complex 5'-Regulatory Region of The Cancer Associated Gene B4GALT1
 And Its Comparison With the Gene Family, *Poster*, BBACGR-2015, Qatar University, Doha,
 State of Qatar. (Collaborating with others). April 2015.
- Understanding Smokers Attitude: From Gender Prospective, *Poster*, BBACGR-2015, Qatar University, Doha, State of Qatar. (Collaborating with others). **April 2015**.
- Robust Techniques for Profile Monitoring via Non-linear Mixed, *Invited Talk*, 4th International Conference on Mathematics & Information Science (ICMIS 2015), Zewail City of Science and Technology, Egypt. (February 2015).
- Novel Techniques for Phase I Profile Monitoring via Non-linear Mixed Models, *Contributed Paper*, Joint Research Conference, Seattle, Washington. (June 2014).
- Interview Strategies and Practical Tips: Personal Experiences from Academics to Business, *Invited Session*, Ohio State University, ESA, Columbus, Ohio. (January 2013).
- Model Robust Regression, *Invited Talk*, Dow AgroSciences, Global Business, Indianapolis, Indiana. (September 2012).
- A Semiparametric Mixed (Linear & Non-Linear) Model Approach to Phase I Profile Monitoring, *Invited Talk*, Information Systems, Statistics & Management Science, The University of Alabama, Tuscaloosa, Alabama. (March 2012).
- Nonparametric and Semiparametric Profile Monitoring by Nonlinear Mixed Effects Modeling, Contributed Paper, 2011 Quality and Productivity Research Conference, Roanoke, Virginia. (June 2011).
- New Methods for Profile Monitoring, *Invited Talk*, Department of Statistics, Oklahoma State University, Stillwater, Oklahoma. (December 2010).
- Model Robust Regression: An Overview and Update, *Invited Talk*, JPMorgan Chase & Co., Columbus, Ohio. (December 2010).
- New Methods for Profile Monitoring, Gulf Coast Conference on Probability and Statistics-GCCPS, University of South Florida, Tampa, Florida. (February 2010).
- Profile Monitoring with Fixed and Random Effects using Nonparametric and Semiparametric Methods, *Section on Quality and Productivity*, The 2009 Joint Statistical Meetings (JSM), Washington, DC. (August 2009).

- Parametric Regression Analysis: A Short Overview, Short Course, Graduate Graduate Life Center, Laboratory for Interdisciplinary Statistical Analysis at Virginia Tech, Blacksburg, Virginia.
 (July 2009).
- Interpreting Multiple Regression: A Short Overview, *Invited Talk*, Graduate Seminar Course, The Alliance of Transportation Engineering Students at Virginia Tech, Blacksburg, Virginia. (January 2009).
- Profile Monitoring using Nonparametric and Semiparametric Methods, Contributed talk, 2008
 Quality and Productivity Research Conference, Madison, Wisconsin. (June 2008).
- Profile Monitoring using Nonparametric and Semiparametric Methods, Virginia Academy of Science, *Statistics Session*, 86th Annual Meeting, Hampton University, Hampton, Virginia. Winner Best Student Paper Award. (May 2008).
- Selection of Variables in Discriminant Analysis Using Mathematical Programming Approach, Applied Statistics, 38th Annual Conference on Statistics, Computer Sciences and Operation Research, Institute of Statistical Studies And Research, Cairo University, Giza, Egypt. (April 2003).

Workshops and Seminars

I organized and offered several workshops, short-courses and training programs international and regional; Texas, Atlanta, Virginia Tech University, Oklahoma State University, JPMorgan Chase &Co., Ohio State University, different organizations (HMC, Ministry of Education, Al-Amal Hospital,, etc.) and at Qatar University. In the following sample for my workshops, short-courses and trainings:

- Gave a series (8 days-40 hours) on "Basic Skills for Preparing Scientific and Security Studies" for the Interior Ministry-Qatar, January 2021.
- Gave a series (2 sessions-4 hours) about "Statistical Analysis Using SPSS for Researchers" in the Center for Excellence in Teaching and Learning (CETL)-Fall 2020.
- Gave a series (8 days-40 hours) on "Designing Questionnaires and Statistical Analysis" for Ministry of Education and Higher Education-Qatar, October-November 2019.
- Gave a series (4 lectures-6 hours) on "Statistics Series for Graduate Students" -The Office of Graduate Studies -Qatar University, October-November 2019.
- Gave a series (6 lectures-9 hours) about "Basic Statistical Analysis Using SPSS" in the Office of Faculty and Instructional Development (OFID) facilities-Fall2018.
- Gave a series (4 lectures-6 hours) on "Statistics Series for Graduate Students" -The Office of Graduate Studies -Qatar University, October-November 2018.
- Gave a series (6 lectures-9 hours) about "Advanced Statistical Analysis Using SPSS" in the Office of Faculty and Instructional Development (OFID) facilities-Spring 2018.
- Gave a series (4 lectures-6 hours) on "Statistics Series for Graduate Students" -The Office of Graduate Studies -Qatar University, March-April 2018.
- Conduct a workshop on "Parametric Regression Analysis for Biostatisticians", at the 6th International Conference on Biostatistics and Bioinfromatics, Atlanta, USA. November 2017.
- Conduct a comprehensive workshop on "Item Response Analysis", Ministry of Education, Qatar. (October 1-5, 2017).
- Founder and Chairman of the Organizing Committees for the "2nd Global Training on Research Designs and Statistical Meta-Analysis for Empirical Researchers", Qatar University, Qatar. (February 6-7, 2017). http://www.qu.edu.qa/global_training_2017/
- Conduct "The workshop on Research Methods and Statistical Designs for Medical Researchers", Heart Hospital, HMC, Qatar. (February 2-4, 2017). https://www.hamad.qa/EN/All – Events/RMSD - 2017/Pages/default.aspx

- Gave a series (4 lectures-6 hours) on "Statistics Series for Graduate Students" -The Office of Graduate Studies -Qatar University, October-November 2017.
- Gave a series (6 lectures-9 hours) about "Hands-on Statistical Analysis Using SPSS" in the Office of Faculty and Instructional Development (OFID) facilities-Fall2017.
- Founder and Chairman of the Organizing Committees for the "Global Training on Research Designs and Data Analysis for Empirical Researchers", Qatar University, Qatar. (February 17-18, 2016). http://www.qu.edu.qa/global_training_2016/
- Gave a series (6 lectures-9 hours) about SPSS for the introductory, intermediate (English) about "Statistical Analysis uses SPSS" in the Office of Faculty and Instructional Development (OFID) facilities.
- Invited lectures for the master students (3 hours) about "Qualitative and Quantitative Data Analysis using the SPSS" at the Department of Accounting and Information Systems, College of Business and Economics, QU.
- Invited talk about "Practical Aspects in using Statistics in Research and Common Mistakes", at Pharmaceutical Sciences Section, College of Pharmacy, QU.
- Judge and Moderator for a session at 10th ICSA (International Chinese Statistical Association), Shanghai, China. December 2016.
- Judge for "The Undergraduate Awards 2016 academic programme", International Academic Awards Programme. UA JUDGING PROCESS 2016.
- Served as an organizing and scientific committee member at the 2nd International Conference on Pure and Applied Sciences(ICPAS-2016), Yildiz Technical University, Turkey. (Jun, 2016).
- Conduct an International training in "Advanced Analytic Techniques using SPSS" at Zewail Education City, Egypt. (February 11-13, 2016).
- Served as an organizing committee member at the 5th International Conference on Mathematics & Information Science (ICMIS 2016), Zewail City of Science and Technology, Egypt. (February 2016).
- Judge and Moderator for a session at 4th International Conference and Exhibition on Biometrics & Biostatistics, San Antonio, TX, USA. (November 2015).
- Judge and Moderator for a session at *The Joint Statistical Meetings 2015 (JSM2015)*, Seattle, WA, USA. (August 2015).
- Conduct an International training in "Advanced Statistical Analysis using SPSS" at the 4th International Conference and Exhibition on Biometrics Biostatistics, United States. (November 16-18, 2015).
- "Qualitative and Quantitative Data Analysis using SPSS", Invited Lectures, MS students, College of Business and Economics, Qatar University, Doha, State of Qatar. 2015.
- "Biostatistics and Bioinformatics", Short Course collaborating with others, International attendees, Qatar University, Doha, State of Qatar. 2015.
- "Common Mistakes in Utilizing Statistics", Invited Seminar, College of Pharmacy, Qatar University, Doha, State of Qatar. 2015.
- "Statistical Analysis via SPSS for Social Science", Invited Lectures, Department of Social Sciences, Qatar University, Doha, State of Qatar. 2015.
- "Topics in Biostatistics", Invited Lecture, Department of Health Sciences, Qatar University, Doha, State of Qatar. 2015.
- SPSS Intermediate and Advanced Series (18 lectures, 27 hours), Office of Faculty Instruction Development (OFID), Qatar University, Doha, State of Qatar. 2014/2015.

- Trainings on "Leadership and Decision Making", "Scientific Approach and Administration Challenges" and "Information Systems and Problem Solving" (15 hours), National Academy for Professional Training (NAPT) for Qatar Security and Military Forces. 2014/2015.
- SPSS Introductory and Advanced Series (18 lectures, 27 hours), Office of Faculty Instruction Development (OFID), Qatar University, Doha, State of Qatar. 2013/2014.
- Sampling Techniques and Strategies, Social Rehabilitation Center, Doha, State of Qatar. March 20th, 2014.
- Descriptive Statistical Analysis using the SPSS, Institutional Planning and Development (OIPD), Qatar University, Doha, State of Qatar. December, 2013.
- Advanced Statistical Analysis using the SPSS, Foundation Program, Qatar University, Doha, State of Qatar. December, 2013.
- Interview Strategies and Practical Tips: Personal Experiences from Academics to Business, Ohio State University, ESA, Columbus, Ohio, USA. January 2013.
- How to Implement Advanced Statistical/Economic Analysis, including statistical and financial models, to evaluate the performance of different business segment relationships, **JPMorgan** Chase & Co., Ohio, USA.
- How to Extract and Manipulate Large data sets using SAS programming, **JPMorgan Chase** & Co., Ohio, USA.
- Parametric Regression Analysis: A Short Overview, Laboratory for Interdisciplinary Statistical Analysis at Virginia Tech, Blacksburg, Virginia, USA.
- Interpreting Multiple Regression: A Short Overview, **The Alliance of Transportation Engineering Student** at Virginia Tech, Blacksburg, Virginia, USA.
- Advanced Statistical Analysis Techniques for Quality Assessment and Quality Assurance, Center for Highway asset Management Programs (CHAMPS) and the Virginia Department of Transportation (VDOT), Virginia, USA.

Editorial Service/others

- Served as an organizing and scientific committee member at the 2nd International Conference on Applied Anslysis and Mathematical Modeling (ICAAMM2018, Istanbul Gelisim University, Putra University, Malaysia and Malaysian Mathematical Sciences Society, Turkey. (Jun, 2018).
- Served as an organizing committee member at the 7th International Conference on Mathematics and Information Sciences, Cairo, Egypt. (February, 2018).
- Founder, Trainer and Chairman of the Organizing Committees for the 1st and 2nd Global Training on Research Designs and Data Analysis for Empirical Researchers, Qatar University, Qatar. (February 2016-2017).
- Served as an organizing and scientific committee member at the 4th International Conference on Pure and Applied Sciences (ICPAS-2017), Istanbul, Turkey. (November, 2017).
- Served as an organizing committee member at the 3th International Conference on Pure and Applied Sciences, Dubai, UAE. (March, 2017).
- Served as an organizing committee member at the 6th International Conference on Mathematics and Information Sciences, Cairo, Egypt. (February, 2017).
- Served as an organizing and scientific committee member at the 2nd International Conference on Pure and Applied Sciences(ICPAS-2016), Yildiz Technical University, Turkey. (Jun, 2016).
- Served as an organizing committee member at the 5th International Conference on Mathematics & Information Science (ICMIS 2016), Zewail City of Science and Technology, Egypt. (February 2016).

- Judge and Moderator for a session at 4th International Conference and Exhibition on Biometrics Biostatistics, San Antonio, TX, USA. (November 2015).
- Judge and Moderator for a session at *The Joint Statistical Meetings 2015 (JSM2015)*, Seattle, WA, USA. (August 2015).
- Founder and Chairman of the Organizing Committees for the International Conference on Bioinformatics and Biostatistics Applications in Cancer Genomics Research, Qatar University, Qatar. (April 2015).
- Judge and Moderator for a session at Scientific Research is a Pillar for Sustainable Development in the Numeric Age, Social Containment Consulting Center with Social Consultancy London, Qatar. (March 2015).
- Served as a moderator for an invited session at the 4th International Conference on Mathematics & Information Science (ICMIS 2015), Zewail City of Science and Technology, Egypt. (February 2015).
- Served as an organizing committee member at the 4th International Conference on Mathematics & Information Science (ICMIS 2015), Zewail City of Science and Technology, Egypt. (February 2015).
- Served as a moderator for a contributed session at the Joint Research Conference, Seattle, Washington. (June 2014).
- Editor-in Chief for Journal of Statistics Applications & Probability-An International Journal. 2014-Present.
- Main Editor for Journal of Statistics Applications & Probability Letters-An International Journal. 2014-Present.
- Editorial Board member for **International Journal of Electromagnetics**-An International Journal. **2015-Present**.
- Editorial Board member for **Pakistan Journal of Statistics**-An International Journal. **2014-2020**.
- Reviewer for Environmetrics. 2018-Present.
- Reviewer for IEEE Access. 2018-Present.
- Reviewer for Communications in Statistics Theory and Methods. 2017-Present.
- Reviewer for Computers & Industrial Engineering Journal Elsevier. 2017-Present.
- Reviewer for Journal of Statistical Computation and Simulation. 2013-Present.
- Reviewer for International Journal of Statistics and Applications . 2012-Present.
- Reviewer for American Journal of Operational Research. 2012-Present.

Supervision for MSc. and PhD. Students

- Chelsea Jones (Expected 2021). PhD. Dissertation Title: "Bayesian EWMA and CUSUM Control Charts Under Different Loss Functions", Systems Modeling and Analysis, Virginia Commonwealth University, VA, USA. Working: Data Modeler Risk Solutions, LexisNexis Co., USA.
- Radwa Mohamed Ismail Mohamed (Expected 2021). MSc. Thesis Title: "On Variable Selection with the Presence of Missing Data in Longitudinal Panel Studies." Qatar University, Qatar.
- Mashael Mohammed Aldosari (Expected 2021). MSc. Thesis Title: "Generalize Point Biserial Correlation Coefficient to Measure the Association Between a set of Binary Variables and a Continuous Variable." Qatar University, Qatar.
- Sara Husam Nassar (2020). MSc. Thesis Title: "Phase II Non-Parametric and Semi-Parametric Profile Monitoring". Qatar University, Qatar.

- Mohammad Mollazehi (2019). MSc. Thesis Title: "Factors of the Asymmetric Non-Uniform DIF Dectection Rate When Using the Alternative MANTEL-HAENSZEL Procedure". Qatar University, Qatar.
- Zainab Khalid Siddiqui (2018). MSc. Thesis Title: "Semi-Parametric Profile Monitoring for Residuals". Qatar University, Qatar.
- Sepehr Piri (2017). PhD. Dissertation Title: "Parametric, Nonparametric and Semiparametric Approaches in Profile Monitoring of Poisson Data", Systems Modeling and Analysis, Virginia Commonwealth University, VA, USA. Working: Data Modeler Risk Solutions, LexisNexis Co., USA.
- A.M.K.R. Bandara (2016). PhD. Dissertation Title: "Nonparametric and Semiparametric Profile Monitoring Methods for Non-normal Data". Working: Head of the Department of Agricultural Systems, Faculty of Agriculture, Rajarata University of Sri Lanka, Puliyankulama, Sri Lanka.

Computer Skills

Statistical Software: SAS, SPSS, R, Design Expert, JMP, Minitab and STATA.

Office Package: LATEX, Word, Excel, Powerpoint.

Program: Matlab, Maple.

Operating Systems: Linux, Windows.

Professional Society Memberships

- Fellow member of the Royal Statistical Society (RSS) 2017-present.
- Committee to Nominate Fellows Chair (ASA- Quality & Productivity Section) 2015-present.
- American Statistical Association (ASA) 2005-present.
- Institute of Mathematical Statistics (IMS) 2007-present.
- American Society for Quality (ASQ) 2008-present.
- Principal of ISNRV Sunday School, 2008/2009-2009/2010.
- Vice President of VT Chapter of Mu Sigma Rho (National Statistics Honor Society), 2008/2009.
- Sigma Xi, The Scientific Research Society, 2009-present.
- Virginia Tech Postdoctoral Association, 2010-present.