CURRICULUM VITAE

PERSONAL DATA

Name	Dr. Sultan Hussain
Nationality	Pakistani
Position	Assistant Professor
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EDUCATION

Year	Academic Degree	Institution
2009	PhD	Abdus Salam School of Mathematical Sciences, GC University Lahore, Pakistan
2000	MSc	Department of Mathematics, University of Peshawar, Pakistan
1998	BSc	Peshawar University, Pakistan

WORK EXPERIENCE

Period	Position	Address
November 03, 2025 till date	Assistant Professor	Department of Mathematics and Statistics, College of Sciences, Imam Mohammad Ibn Saud Islamic University (IMSIU), Riyadh.
February 17, 2026 to date (On leave)	Associate Professor	Department of Mathematics, COMSATS University Islamabad Abbottabad Campus, Abbottabad Pakistan
July 01, 2009 to February 16, 2026	Assistant Professor	Department of Mathematics, COMSATS University Islamabad Abbottabad Campus, Abbottabad Pakistan
July 1, 2012 to August 31, 2012	Academic Visitor	Financial and Actuarial Mathematics, Institute for Financial and Actuarial Mathematics, The University of Liverpool, UK
February 18, 2009 to June 30, 2009	Lecturer	Department of Mathematics, COMSATS University Islamabad Abbottabad Campus, Abbottabad Pakistan

February 1, 2004 to September 30, 2005	Lecturer	Education Department, Pakistan

RESEARCH INTERESTS

Financial and Actuarial Mathematics, Mathematical Modeling under Islamic Finance, Ruin Probability, Fractional Differential Equations, Dynamical System, etc.

PUBLICATIONS

1. Shoaib, **Sultan Hussain**, Javed Rashid, Stability and Dynamics of Solitons in Extended (3+1) dimensional Kairat Models for Optical Fibers and Photonic Crystals. Accepted in Optical and Quantum Electronics.

2. Javed Rashid, Shoaib, **Sultan Hussain**, Enhancing Breast Tumor Segmentation in Ultrasound Images with EfficientNet-B4 and UNet++ Integration. Accepted in Egyptian Informatics Journal.

3. **Sultan Hussain**, Munaza Naz, Abdul Sami Awan, Nasir Rehman. Mathematical Modelling of the Discrete Time Investment Strategy of Insurance Companies. FILOMAT. 40(5): 1915-1924, 2026. https://doi.org/10.2298/FIL2605915H

4. Javed Rashid, **Sultan Hussain**, Alina Shabbir, Muhammad Shoaib Saleem, Muhammad Faheem. Enhancing Breast Tumor Segmentation in Ultrasound Images with EfficientNet-B4 and UNet++ Integration. Breast Journal. Accepted in Egyptian Informatics Journal.

5. Darshan, Javed Hussain, **Sultan Hussain**. A Multi-Compartment Tumor–Immune Model Under Uncertain Differential Dynamics and Therapeutic Forcing. Published on 24/1/2026 in Mathematics. Mathematics 2026, 14, 408. https://www.mdpi.com/2227-7390/14/3/408.

6. **Sultan Hussain** and Nasir Rehman, On the Solution of Fractional Differential Equations. Journal of Computational Analysis and Applications, ISSN: 1521-1398 (2025), 34(5) 85-94. **https://eudoxuspress.com/index.php/pub/article/view/2871/2026**

7. Abdul S. Awan and **Sultan Hussain.** Differential-anti-differential equations and their solutions. Punjab University Journal Of Mathematics. (2023), 55(7-8), 311-326. http://pu.edu.pk/images/journal/maths/PDF/Paper_4_55_(7-8)_2023.pdf

8. **Sultan Hussain**, Hifsa Arif, Muhammad Noorullah and Athanasios A. Pantelous, Pricing American Options under Azzalini It^o-McKean Skew Brownian Motions. Applied Mathematics and Computations. 451 (2023) 128040. ISSN 1873-5649. https://www.sciencedirect.com/science/article/pii/S0096300323002096?dgcid=coauthor

9. Hussam Alrabaiah, **Sultan Hussain**, Abdul Sami Awan, Anwar Zeb, Kamal Shah, Thabet Abdeljawad, A New Approach to Fractional Differential Equations. Thermal Science 27(1) 2023, 301-309. https://doiserbia.nb.rs/img/doi/0354-9836/2023/0354-983623301A.pdf.

10. **Sultan Hussain**, Nasir Rehman; Faryal Fatima; M. Shoiab Saleem. Study of European Style Options Under It^o-McKean Brownian Motion with Azzalini Skew-Normal Distribution. FILOMAT 36(17) 2022, 5843-5856. (X category) (Published on 14 December 2022) (I.F. 0.844). https://www.pmf.ni.ac.rs/filomat-content/2022/36-17/36-17-12-17275.pdf

11. Noor Jamal, Muhammad Sarawr, **Sultan Hussain**, Aiman Mukheimer. Existence criteria for the unique solution of first order linear fuzzy differential equations on the space of linearly correlated fuzzy numbers. Fractals (2022) 30(22) 2240221 (I.F. 4.555). DOI: 10.1142/S0218348X22402216. https://www.worldscientific.com/doi/epdf/10.1142/S0218348X22402216

12. **Sultan Hussain**, Anwar Zeb; Akhter Rasheed; Tareq Saeed. Stochastic mathematical model for the spread and control of Corona virus. Advances in Difference Equations (2020) 2020:574 (I.F. 1.720) ISSN: 1687-1847. https://doi.org/10.1186/s13662-020-03029-6.

13. Zizhen Zhang, Anwar Zeb, **Sultan Hussain**, Ebraheem Alzahrani, Dynamics of COVID-19 mathematical model with stochastic perturbation. Advances in Difference Equations. (2020) 451 (I.F. 1.720) ISSN: 1687-1847. https://advancesindifferenceequations.springeropen.com/articles/10.1186/s13662-020-02909-1.

14. Zakir Hussain, Ahmed Elazab, **Sultan Hussain** and Huisheng Zhang, Instability of three dimensional electrically conducting fluid of magnetohydrodynamics Couette flow. AIP ADVANCES 9, 105214 (2019); ISSN: 2158-3226 https://aip.scitation.org/doi/10.1063/1.5096455.

15. Zhang Yang, Zakir Hussain, Abid Hussian, **Sultan Hussain** and Huisheng Zhang, Instability of magnetohydrodynamic flow of Hartmann layers between parallel plates. AIP ADVANCES 9, 055003 (2019). ISSN: 2158-3226. https://aip.scitation.org/doi/10.1063/1.5086975.

16. Zakir Hussain, **Sultan Hussain,** Tiantian Kong and Zhou Liu, "Instability of MHD Couette Flow of an Electrically Conducting Fluid", AIP ADVANCES 8, 105209 (2018). ISSN: 2158-3226. https://aip.scitation.org/doi/10.1063/1.5051624.

17. **Sultan Hussain,** Dynamical behavior of mathematical model on the network of militants, Punjab University Journal of Mathematics, 51(1), 2019, 51-60. ISSN 1016-2526. http://pu.edu.pk/images/journal/maths/PDF/Paper-5_51_1_2019.pdf.

18. **Sultan Hussain**, Salman, Nasir Rehman and Shoaib Saleem, Hedging Error Estimate of the American Put Option Problem in Jump-Diffusion Processes, FILOMAT, 32(8), 2018, 2813-2824. http://www.pmf.ni.ac.rs/filomat-content/2018/32-8/32-8-10-6131.pdf.

19. **Sultan Hussain** and Aqsa, Wealth investment strategies for insurance companies and the probability of ruin, Iranian Journal of Science and Technology, transaction A: Science (2018). 42(3) 1555-1561,

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20. Anwar Zeb, **Sultan Hussain**, Obaid J Algahtanib and Gul Zaman, Global Aspects of Age-Structured Cigarette Smoking Model. Mediterranean Journal of Mathematics, (2018) 15-72 (ISI, I.F=0.868). DOI: 10.1007/s00009-018-1098-8. https://link.springer.com/article/10.1007/s00009-018-1098-8.

21. **Sultan Hussain**, Sumbal Maroof, Anwar Zeb and Nasir Rehman, Optimal Conditions for the Control of Ebola Viral Disease. Journal of Antiviral & Antiretrovirals, 9(3) (2017). DOI: 10.4172/1948-5964.1000165. https://www.omicsonline.org/open-access/optimal-conditions-for-the-control-of-ebola-viral-disease-1948-5964-1000165.pdf.

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23. M. Shoaib, M. Sarwar, and **Sultan Hussain** and G. Ali, Existance and uniqueness of common fixed point for mappings satisfying integral type contractive conditions in G-matric spaces, Matriks Sains Matematik (MSMK) (2017) 1(1), 1-12 http://www.razipublishing.com/archives/MSMK/2017-issue1/1.Existence%20and%20Uniqueness%20of%20Common%20Fixed%20Point%20for%20Mappings%20Satisfying%20Integral%20Type%20Contractive%20Conditions.pdf.

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