CURRICULUM VITAE

PERSONAL DATA

Name	Dr Sultan Hussain
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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. Sultan Hussain, Athanasios Pantelous. An exact criterion for a local-time-weighted first-passage identity. Statistics and Probability Letters. Accepted on 13/9/2026. (I.F. 0.8).

2. Muhammad Israr Aslam, Manahil Ali, Sultan Hussain, Abdul Malik Sultan and Xiao-Xiong Zeng. Visual Characteristics of a Rotating Black Hole in 4D Einstein-Gauss-Bonnet Gravity with Thin Accretion Disk Under EHT Constraints. Journal of Cosmology and Astroparticle Physics. JCAP09(2026)001. **DOI** 10.1088/1475-7516/2026/09/001 Published on 1/9/2026. I.F. 6.4.

3. Saqib Zia, Saeed urRahman, José Luis Díaz Palencia, Ghania Zia, Wei SinKoh, Sultan Hussain. Hopf Bifurcation Analysis and Matched Asymptotics for a Bi-Stable Flame Propagation Model. *Advances in Mathematical Physics*, 2026; 2026: 8890476. Published on September 02, 2026. https://doi.org/10.1155/admp/8890476

4. Rassim Darazirar, Anwar Zeb, Sultan Hussain. Traveling Waves in a Two-Group Generalized Kermack McKendrick Epidemic Model With Time Delay and Nonlocal Dispersion. *Mathematical Methods in the Applied Sciences*, 2026; 0:1–23. https://doi.org/10.1002/mma.70869. I.F. 2.00.

5. Muhammad Shoaib Saleem, Sultan Hussain, Sonia Ashfaq, Javed Rashid, Abdul Guddoos, S.A. Gaid. Comparative Long-Term Forecasting of Renewable and Nonrenewable Electricity Generation Using Temporal Convolutional Networks: Evidence From European and American Countries. International Journal of Energy Research. (I.F. 4.3). 2026; 2026:4808127. https://doi.org/10.1155/er/4808127

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7. Sohail Khan, Akbar Zada and Sultan Hussain, Controllability of Hammerstein impulsive integro-differential equation driven by Atangana Baleanu Caputo fractional derivative. Journal of Vibration and Control. 2026, Vol. 0(0) 1–29
DOI: 10.1177/10775463261458432. Q2. Published on 1/7/2026.

8. Javed Hussain, Sultan Hussain. Fractional KdV–Type Systems: Analytical Study via the Fractional Reduced Differential Transform Algorithm. Engineering Computations, 1-31. SCIE+Q2. Accepted on 19/5/2026, published on July 27, 2026. (I.F. 1.9) https://doi.org/10.1108/EC-01-2026-0011

9. Shoaib. Optimizing Urdu Grammar Error Correction through Deep Reinforcement Learning-Based Sequential Modeling. ACM Transactions on Asian and Low-Resource Language Information Processing. SCIE+Q3. Accepted on 19/5/2026. (I.F. 2).

10. S. Ahmad, S. Hussain, M.S. Saleem, J. Rashid. Leveraging weather parameters to predict household energy consumption: a study from northeast Mexico using temporal fusion transformers. International Journal of Environmental Science and Technology, 23:454 2026. Published on 17 May 2026. https://doi.org/10.1007/s13762-026-07270-6. (I.F. 3.4) ISSN: **1735-1472.**

11. Haitham Qawaqneh, Abdallah Shihadeh, Wael Mahmoud Mohammad Salameh, Sultan Hussain, Muhammad Zeeshan, Takaaki Fujita. A Novel Cubic Circular Picture Fuzzy Set Framework with Bonferroni Mean Operators and Its Application to Quantum Computing Technology Selection. AIMS Mathematics 11(5): 14412-14456. DOI: 10.3934/math.2026591.

12. Waqar Khan, **Sultan Hussain**, A Unified Slip–Transpiration Framework for NePCM Flow over Deforming Boundaries" International Journal of Numerical Methods for Heat and Fluid Flow. . 36 (10): 3951–3978. Accepted on 14/4/2026. I.F. 5.1. Q1 + SCIE. 10.1108/HFF-01-2026-0119.

13. Muhammad Israr Aslam, **Sultan Hussain**, Hamail Tabasum Naseer, Abdul Malik Sultan. Consequences of Thermal Fluctuations and Shadows of Nonsingular Black Hole in 4D Einstein-Gauss-Bonnet Gravity. Fortschritte der Physik, 2026; 74:e70107 SCIE+Q1. Published on 17/4/2026. (I.F. 7.8) https://doi.org/10.1002/prop.70107 .

14. Kiran Khush, **Sultan Hussain**, Hamood Ur Rehman and Yakup Yildirim. Stability and dynamics of solitons in extended (3+1)-dimensional kairat models for optical fibers and photonic crystals. Optical and Quantum Electronics. 58:162 (2026) https://doi.org/10.1007/s11082-026-08725-3. Q1+SCIE. IF. 4.

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

16. **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

17. 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.

18. 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.

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20. 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

21. **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

22. 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.

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