



## **Dr. MUHAMMAD JAWED IQBAL**

### **Professor and Director**

Institute of Space Science and Technology  
University of Karachi, Karachi, Pakistan  
javiqbal@uok.edu.pk

### **Areas of Interest**

Space Sciences, Gravitation Physics,, Statistical Modelling of Regional Climate Variability

### **Research Experienced**

No. of Research Publications: 75 (41 articles published in impact factor journals)  
Research Supervision: Ph.D. Thesis: 14, M.Phil. Thesis: 12  
HEC Approved Supervisor

### **Awards / Scholarship**

- ❖ Indigenous Ph.D. Scholarship, Higher Education Commission, Islamabad, 2002-2004
- ❖ Post Doctoral Fellowship, Higher Education Commission, Islamabad, 2008
- ❖ Nishan-e-Azmat-e-Danish 2007, In Recognition of Meritorious Services to Education and Research at the University of Karachi by Karachi University Teachers' Society 2006-2007.

### **Member of Scientific Bodies**

- ❖ Member of National Steering Committee of National Center of GIS and Space Applications, Islamabad
- ❖ Associate Editor, Arabian Journal of Geosciences, Spring
- ❖ Life Member, American Geophysical Union (AGU), USA.
- ❖ Member, Board of Faculty of Science, University of Karachi, from Jan 2012 to date
- ❖ Member, Academic Council, University of Karachi, from Dec. 2013 to date
- ❖ Member, Senate, University of Karachi
- ❖ Member, National Curriculum Revision Committee for Space Science, HEC, 2005 & 2011
- ❖ Member, Departmental Research Committee, Department of Mathematics, University of Karachi, 2009-2011
- ❖ Member, AIAA , USA, 2007-2008
- ❖ Member, National Centers of GIS and Space Applications (NCGSA), Islamabad
- ❖ Member, National Astronomy Education Committee (Pakistan), IAU
- ❖ Member, Scientific Society of Pakistan

## Academic Profile

- ❖ Post Doc. School of Marine and Atmospheric Sciences, Stony Brook University, USA, Feb. 08- Jan 09
- ❖ Ph. D. (Geo-Space Science), Institute of Space and Planetary Astrophysics, University of Karachi, Karachi, 2006  
[Thesis title: Detection and Modelling of Hydrometeorological Variability over Pakistan Region]
- ❖ M. Phil. (Applied Mathematics), University of Karachi, Karachi, 2000,  
[Thesis title: Corrections to orbital theory due to solar rotation]
- ❖ M. Sc. (Applied Mathematics), University of Karachi, Karachi, 1993
- ❖ B. Sc. (Honours) in Mathematics, University of Karachi, Karachi
- ❖ Certificate Course in Atmospheric Dynamics, SUPARCO, Karachi
- ❖ Certificate Course in Astronomy & Astrophysics, SUPARCO, Karachi

## Professional Profile

- ❖ Professor, University of Karachi, Institute of Space and Planetary Astrophysics, University of Karachi, May, 2011 to date
- ❖ Visiting Faculty, Department of Mathematical Sciences, IBA, Karachi, Feb 2013 to date
- ❖ Assistant Professor, Department of Mathematics, University of Karachi, June 2000 to April, 2011
- ❖ Lecturer, Department of Mathematics, University of Karachi, 1996-2000
- ❖ Cooperative Teacher, Department of Mathematics, University of Karachi, 1993-96
- ❖ Visiting Faculty, NCRS, Institute of Space Technology, Karachi, 2009 to date
- ❖ Visiting Faculty, Institute of Space and Planetary Astrophysics, University of Karachi, 2002 to Jan 18, 2012
- ❖ Visiting Faculty, NED University of Engineering and Technology, Karachi, July 2012 to date
- ❖ Visiting Faculty, IIEE, Karachi, 2004 - 2005
- ❖ Visiting Faculty, Federal Urdu University for Arts, Science and Technology, Karachi, Jan 2007- Dec 2007

## Administrative Experience

- ❖ Director, Institute of Space and Planetary Astrophysics, University of Karachi, from Aug 4, 2017 to date

- ❖ Director, Institute of Space and Planetary Astrophysics, University of Karachi, from Jan 2014 to Jan 31, 2017
- ❖ In Charge, Institute of Space and Planetary Astrophysics, University of Karachi, from Jan 19, 2012 to December 2013

## Teaching Activity (Courses taught)

- |                         |                         |
|-------------------------|-------------------------|
| ☆ Astronomy             | ☆ Statistical Analysis  |
| ☆ Space Flight Dynamics | ☆ Mathematical Physics  |
| ☆ Classical Mechanics   | ☆ Numerical Computing   |
| ☆ Atmospheric Science   | ☆ Differential Geometry |
| ☆ Gravitation Physics   | ☆ Financial Mathematics |
| ☆ Research Methodology  | ☆ Calculus              |

## Computer skills

- ❖ Computer Languages: MATLAB and FORTRAN, C++ (beginner level)
- ❖ Computer Software: Ms Word, Ms Excel, PowerPoint, STATISTICA

## Participation in Conferences, Seminars, Workshops etc.

- ❖ International Conference on Gravitation and Cosmology, Jan 28-31, 2024, Lahore
- ❖ Seven International Conference on AeroSpace Science & Engineering (ICASE), Dec 14-16, 2021, Islamabad
- ❖ International Conference on Gravitation and Cosmology, Nov 22-25, 2021, Lahore
- ❖ Sixth International Conference on AeroSpace Science & Engineering (ICASE), Nov 12-14, 2019, Islamabad
- ❖ International Conference on Gravitation and Cosmology, Jan 23-31, 2019, Lahore
- ❖ International Olympiad on Astronomy and Astrophysics, Nov 2-11, 2018, Beijing, China
- ❖ Fifth International Conference on AeroSpace Science & Engineering, Nov 14-16, 2017
- ❖ Fourth International Conference on AeroSpace Science, Aug 21-23, 2015
- ❖ International Conference on Relativistic Astrophysics, Feb 10-14, 2015, Lahore (Department of Mathematics, University of the Punjab)
- ❖ International Conference on Space 2014, Nov. 12-14, 2014, Islamabad (SUPARCO)
- ❖ Third International Conference on AeroSpace Science, Aug 21-23, 2013
- ❖ Second National Conference on Space Sciences, October 8-8, 2013, University of Karachi
- ❖ Workshop on Synopsis / Thesis Writing, Dean Faculty of Science, University of Karachi, June 27, 2013
- ❖ First National Conference on Space Sciences, October 8-9, 2012, University of Karachi
- ❖ National Space Conference 2012, September 17-19, 2012, Islamabad
- ❖ Regional Workshop on High Performance and Grid Computing, 2010, **Iran**

- ❖ Conference on Decadal Predictability, ICTP, **Italy**, August 19, 2010 (Video Conferencing)
- ❖ First National Conference on Mathematical Sciences, 2010, Karachi
- ❖ AGU Fall Meeting 2008, San Francisco, CA, **USA**
- ❖ Atmospheric Science Seminar, School of Marine and Atmospheric Sciences (SoMAS) Stony Brook University, NY, **USA**, October 2008
- ❖ Seminar, IRI, Columbia University, NY, **USA**, November 2008
- ❖ IAMAS Conference, Beijing, **China**, 2005
- ❖ 5<sup>th</sup> Pure Mathematics Conference, Islamabad, 2004
- ❖ National Australian Convention of Amateur Astronomers, **Australia**, 2004
- ❖ World Conference on 21<sup>st</sup> Century Mathematics, Lahore, 2004
- ❖ World Climate Change Conference, Moscow, **Russian Federation**, 2003
- ❖ Second ICTP Conference on Detection and Modelling of Regional Climate Change, the Abdus Salam ICTP, Trieste, **Italy**, 2002
- ❖ National Seminar on Atmospheric and Ionospheric Physics (AIP), SUPARCO, 2002
- ❖ 7<sup>th</sup> Islamic Countries Conference on Statistical Analysis, Islamic Society of Statistical Sciences, Lahore, 2001
- ❖ All Pakistan Mathematical Conference, University of Sindh, Jamshoro, 2000
- ❖ International Conference on Technology and Development in the New Millennium, under the joint Auspices of the Science, Technology And Development Forum (UK) for Third World and the University of Karachi, 2000
- ❖ All Pakistan Mathematical Conference, Punjab Mathematical Society, Faisalabad, Pakistan, 1997
- ❖ BCSPIN Particle Physics School, Department of Physics, Quaid-i-Azam University, Islamabad, 1997
- ❖ Symposium on Industrial and Business Mathematics, Department of Mathematics, University of Karachi, 1996
- ❖ International Albert Einstein Seminar, SUPARCO, Karachi, 1994

### *Organising Conferences, Seminars, Workshops, etc.*

- ❖ International Conference on Space Science, Institute of Space Science and Technology, University of Karachi, October 9-10, 2023 (**Convenor**)
- ❖ International Conference on Space Science, Institute of Space Science and Technology, University of Karachi, October 6, 2022 (**Convenor**)
- ❖ Fifth National Conference on Space Science, Institute of Space and Planetary Astrophysics, University of Karachi, October 9-10, 2016 (**Convenor**)
- ❖ Fourth National Conference on Space Science, Institute of Space and Planetary Astrophysics, University of Karachi, October 6-7, 2016 (**Convenor**)
- ❖ Third National Conference on Space Science, Institute of Space and Planetary Astrophysics, University of Karachi, October 5-6, 2015 (**Convenor**)
- ❖ Symposium on Detection of Gravitational Waves: Evidence of Cosmic Inflation, Dean Faculty of Science, University of Karachi, , April 9, 2014 (**Convenor**)

- ❖ Second National Conference on Space Science, Institute of Space and Planetary Astrophysics, University of Karachi, October 7-8, 2013 (**Convenor**)
- ❖ A Seminar on Radio Astronomy and Its Impact on Economy, Institute of Space and Planetary Astrophysics, University of Karachi, April 2, 2013 (**Convenor**)
- ❖ Workshop on Synopsis/ Thesis Writing, Dean Faculty of Science, University of Karachi, June 27, 2013 (**Convenor**)
- ❖ First National Conference on Space Sciences, Institute of Space and Planetary Astrophysics, University of Karachi, October 8-9, 2012 (**Convenor**)
- ❖ Seminar on Prediction of first Sighting of the New Crescent Moon, University of Karachi, July 17, 2012 (**Convenor**)
- ❖ Observation of Transit of Venus, ISPA Astronomical Observatory, University of Karachi, June 6, 2012
- ❖ First National Conference on Mathematical Sciences, Department of Mathematics, University of Karachi, March 22, 2010 (**Secretary**)

## List of Publications

### (A) Impact Factor International Journals

1. Iqbal MJ and Quamar J (2003), 'Planetary Orbits around a Spinning Gravitating Star', *Indian Journal of Physics*, Vol. 77B, No. 4
2. Alam K, Iqbal MJ, Blaschke T, Qureshi S and Khan G (2010), "Monitoring the spatio-temporal variations of aerosol and aerosol-cloud interaction using MODIS data over Pakistan, *Advances in Space Research*, Vol. 46: 1162–1176, **Elsevier**
3. Khan B, Iqbal MJ and Yousufzai MAK (2011), "Flood Risk Assessment of River Indus of Pakistan", *Arabian Journal of Geosciences*, Vol. 4, No. 1-2, pp. 115-122, **Springer**, DOI 10.1007/s12517-009-0110-9,
4. Hameed S, Iqbal MJ, Rehaman S and Collins D (2011), "Impact of the Indian Ocean High Pressure System On Winter Precipitation over Western Australia and Southwest Western Australia", Vol. 61: 159-170, *Australian Meteorological and Oceanographic Journal*
5. Iqbal MJ, Yousufzai MAK and Jawaid Quamar (2011), "Spectral analysis of local climatic fluctuations", *Arabian Journal of Geosciences*, Vol. 4, No. 1-2: 291-298, **Springer**, DOI 10.1007/s12517-010-0154-x

6. Iqbal MJ and J Quamar (2011),“ Measuring temperature variability of five major cities of Pakistan’, *Arabian Journal of Geosciences*, Vol. 4, No. 3-4: 291–298, **Springer**, DOI 10.1007/s12517-010-0224-0,
7. Iqbal MJ, S. Hameed and F. Khan (2013), “Influence of Azores High Pressure on Middle Eastern Rainfall”, *Theoretical and Applied Climatology*, Vol. 111: 211-221, **Springer**, DOI: 10.1007/s00704-012-0648-4
8. Iqbal MJ and K Ilyas (2013),“ Influence of Icelandic Low Pressure on Winter Precipitation Variability over Northern Part of Indo-Pak Region’, *Arabian Journal of Geosciences*, Vol. 6(2): 543-548, **Springer**, DOI: 10.1007/s12517-011-0355-y
9. Iqbal MJ, Baig MJ and S Naz (2013),” Dominant Impact of South Asian Low Heat on Summer Monsoon Rainfall over Central India” *Arabian Journal of Geosciences*, Vol. 5: 2001-2005, **Springer**, DOI 10.1007/s12517-011-0458-5
10. Khan B and Iqbal MJ (2013), “Forecasting Flood Risk in the Indus River system using Hydrological Parameters and its Damage Assessment ”, *Arabian Journal of Geosciences*, Vol. 6 (10): 4069-4078, DOI 10.1007/s12517-012-0665-8, **Springer**
11. Iqbal MJ, F Riaz and B M K Ghauri (2013), “Impact of Siberian High on Rainfall Variability over Northern Part of Indo-Pak Region”, *Arabian Journal of Geosciences* : Vol. 6(8): 3087-3092, DOI: 10.1007/s12517-012-0598-2 (first online published), **Springer**
12. Iqbal MJ and Ali M (2013), “A Probabilistic Approach For Estimating Return Period Of Extreme Annual Rainfall In Different Cities of Punjab”, *Arabian Journal of Geosciences*, **Springer**
13. Alam K, P Madle, T. Trautmann, T. Blaschke and M J Iqbal (2014) “Retrieval of Aerosol Properties from Surface Measurements in an Urban Environment, *Aerosol and Air Quality Research*, Vol. 14:684-696
14. Iqbal M J and S A Rasheed (2016), A Re-interpretation of the impact of the Icelandic low and Azores High on Winter Precipitation over Iberian Peninsula, *Arabian Journal of Geoscience*, Vol 9(2), 1-7
15. Riaz S F, M J Iqbal and S Hameed (2017), Impact of North Atlantic Ocean on Winter Climate of Germany, *Tellus A: Dynamic Meteorology and Oceanography* , 69 (1), 1406263

16. Khan Alam et (2017), Long term (2007-2013) aerosol optical properties over four location of Indo-Gangetic plains, *Applied Optics*, 55(23),6199-6211
17. Riaz S F and M J Iqbal (2017), Singular value decomposition analysis for examining impact of Siberian High on winter precipitation variability over South Asia, *Theoretical and Applied Climatology*, 130 (3-4), 1189-1194
18. Haq IU, M Hussain, MJ Iqbal, NF Siddiqu (2018), Numerical Computation of Hyperbolic Conservation Laws Using Large Time Step Scheme with Artificial Compression Method, *Arabian Journal for Science and Engineering*, 43(7), 3807-3813
19. Riaz S F, M J Iqbal and M J Baig (2017), Influence of Siberian High on Temperature Variability over Northern Areas of South Asia, *Meteorology and Atmospheric Physics*, 130(4), 441-457
20. Siddiqi T A & Iqbal M J (2018), Computational Intelligence based Data-Driven Modeling: A case Study in Hydrology, *International Journal of Computer Applications*, 180:43
21. SH Rizvi, K Alam and MJ Iqbal (2019), Spatial Temporal Variations in Urban Heat Island and Heat Wave , *Journal of Atmospheric and Solar-Terrestrial Physics*, 185, 50-5
22. MJ Iqbal, SU Rehman, S Hameed, MA Qureshi (2019), Changes in Hadley circulation: the Azores high and winter precipitation over tropical northeast Africa, *Theoretical and Applied Climatology*, 1-8
23. Rehman S F and M J Iqbal (2019), Accelerated expansion of the universe and chasing photons from the CMB to study the late time integrated Sachs-Wolfe effect over different redshift ranges, *European Journal of Physics Plus*, 134:302
24. SB Sami, TA Siddiqi, MJ Iqbal (2019) [A neuro-fuzzy modeling for the hydrological time series of floods of river indus of Pakistan](#), *Int J Hydro* 3 (2), 138-147
25. Riaz S M F, M J iqbal, F Khan (2020), Effect of Siberian High and Remote Forcing on Winter Precipitation in the Kingdom of Saudi Arabia (2019), *Journal of Water and Climate Change*,
26. SH Rizvi, H. Fatima, K Alam and MJ Iqbal (2020), The Surface Urban Heat Island Intensity and Urban Expansion: A comparative analysis for the coastal areas of Pakistan, *Environment, Development and Sustainability*, DOI 10.1007/s10668-020-00828-5

27. Naz S, S Sahar, M J Iqbal (2020), Archimedean copula-based bivariate flood-frequency analysis on Sukkur, Pakistan, *Arabian Journal for Science and Engineering*, 13( 28)
28. Ali M, S A Ali, M J Iqbal, Z Aziz, B. Jan (2020), Study The Bayesian Approach for Computing Return Levels of Extreme Rainfall At Khyber Pakhtunkhwa (Kpk), Pakistan, *Journal of Mechanics of Continua And Mathematical Sciences*, 15(1),118-127
29. Z Zhang, Q Zhang, MJ Iqbal (2020), [Climate change impacts and adaptations in arid and semi-arid regions](#), INTERNATIONAL JOURNAL OF CLIMATE CHANGE STRATEGIES AND MANAGEMENT 12 (As guest editor)
30. Riaz S M F, Iqbal MJ, Adeel M (2021) Role of Sea Level Pressure of Arabian Sea on Variability of Summer Monsoon Rainfall over Northern Pakistan, *Theoretical and Applied Climatology*, 145 (1), 861-874
31. SH Rizvi, H. Fatima, K Alam and MJ Iqbal (2021), The effect of urbanization on the intensification of SUHIs: Analysis by LULC on Karachi, *Journal of Atmospheric and Solar-Terrestrial Physics*, 23 (4), 5520-5537
32. Siddiqi T A & Iqbal M J (2021), Estimation of Data Driven streamflow Predicting Models using Machine Learning Methods, *Arabian Journal of Geosciences*, 14 (11), 1-9
33. M Alam, SMF Riaz, MJ Iqbal (2021), [The impact of trends in South Asia Low pressure center on North Indian Ocean air-sea heat fluxes](#), *Journal of Atmospheric and Solar-Terrestrial Physics* 226, 10578
34. SH Rizvi, MJ Iqbal, M Ali (2022) [Probabilistic modeling and identifying fluctuations in annual extreme heatwave regimes of Karachi](#), *Meteorology and Atmospheric Physics* 134 (5), 1-12
35. A Razzak, Z Uddin, MJ Iqbal, K Alam (2022), [Calculation of urban solar radiation based on simulation and fitting of ASHRAE model constants](#), *Arabian Journal of Geosciences* 15 (5), 1-8
36. AA Khan, MJ Iqbal, I Haq(2022), [Numerical Investigation of Multi-Element Low Reynolds Number Airfoils for Fixed-Wing Martian UAV](#), *ASCEND* 2022
37. A Razzak, Z Uddin, MJ Iqbal (2022), [New mathematical approach to determine solar radiation for the southwestern coastline of Pakistan](#), *Advances in Energy Research*

38. A Razzak, Z Uddin, MJ Iqbal (2022), [A Graphical User Interface to Calculate Solar Radiations on Spreadsheet](#), *Spreadsheet in Education*
39. S, Yazdan, MJ Iqbal, M. Hickman (2023), Energy Model in Bianchi Type V Spacetime via RIF integration Techniques, *Modern Physics Letter A*
40. S. Arsalan, MJ Iqbal (2023) Evaluating Optimal Cultivating for Microalgae as a Sustainable Biofuel Energy Resource, *Environmental Research Communications*, 5(10)
41. M. Haq, MJ Iqbal, K. Alam, Z. Huang, T Blaschke (2023), Assessment of Runoff Components of River Flow in the Karakoram Mountains, Pakistan, during 1995-2010, *Remote Sensing*, 15,399
42. I Younus, MJ Iqbal, A Hassan (2023), Towards QoS Optimization in Smart Healthcare: A Systematic Literature Review, *Sensors*, 23
43. S, Yazdan, MJ Iqbal, M. Hickman (2025), Anisotropic models in magnetized Bianchi Type-III Spacetime via a Noether Symmetries, *Modern Physics Letter A*
- 44.

## (B) HEC recognised Local Journals

45. Iqbal MJ (2002), “Seasonal Forecasting of Monsoon Rainfall in Sindh and the Punjab”, *Sindh University Research Journal*, Vol. 34 –A, No. 1
46. Iqbal MJ and Quamar J (2003), “Planetary Orbits in Axisymmetric Vacuum Gravitational Fields”, *Pakistan Journal of Science and Industrial Research*, Vol. 46, No. 3
47. Iqbal MJ (2004), “Temperature Variability over Pakistan”, *Journal of Science & Technology*, Vol. 28, No. 1 & 2
48. YousufZai MAK , Ansari MRK Quamar, J Quamar, MA Hussain and M J Iqbal (2010), “Stratospheric Ozone in the Perspective of Exploratory Data Analysis for Pakistan Atmospheric Regions”, *Journal of Basic and Applied Sciences*, Vol 6, No. 1
49. Iqbal MJ (2010),“ Study of fractal Properties of Climatic Time Series from Pakistan”, *Punjab University Journal of Mathematics*, Vol. 42

50. YousufZai MAK, MRK Ansari, J. Quamar, J. Iqbal and A. Hussian (2010), "Comparison of AR Strategy with that of Regression Approach for determining Ozone Layer Depletion as a Physical Process." NUCLEUS, Vol. 47. No.3
51. YousufZai AYK, MRKl Ansari, J Quamar, J Iqbal and A Hussian (2010), "Predicting the variability in the wavelength structures of the incoming radiation due to Ozone Layer Depletion at the Arabian Sea." NUCLEUS, Vol. 47. No.3
52. Rehman S and Iqbal M J (2011), 'The Relationship Between Indian Ocean High Pressure And Runoff Variability In The Donnelly River Catchment In Southwest Western Australia: A Case Study', NUCLEUS, Vol. 48. No.3
53. Ali M, Iqbal MJ and Jan B (2012), Estimation Rainfall Incident over Sindh Province against different return periods, *Proceedings of Pakistan Academy of Sciences*, Vol. 50. No.2: 159-166
54. Ali M, Iqbal MJ and Jan B (2012), Estimation of Return Levels against different return periods of extreme annual rainfall over Baluchistan, NUCLEUS, Vol. 49. No.3: 221-230
55. Iqbal M J et al. (2012), "Agroclimatic Model for the Estimation of Wheat Production in Punjab Province of Pakistan", *Proceedings of Pakistan Academy of Sciences*, Vol. 49. No.4: 241-249
56. Saleem M S and Iqbal M J (2012), "Investigation Of Chaos Existence In The Time Series Of Lahore Precipitation ", NUCLEUS, Vol. 49. No.1,
57. Ali M and Iqbal MJ (2012), A Probabilistic Approach For Estimating Return Period Of Extreme Annual Rainfall In Different Cities Of Punjab, NUCLEUS, Vol. 49. No.2, pp. 107-114
58. YousufZai MAK, MRK Ansari, J. Quamar and M J. Iqbal (2012), "Modelling and Simulating the Effect of Ozone Layer Depletion on Climate Change at Pakistan Air Space" *Proceedings of Pakistan Academy of Sciences*, Vol. 49. No.2: 145-152
59. Rizvi S H and Iqbal MJ (2014), Impact of Zonal Movement of Indian Ocean High Pressure on Winter Precipitation South East Australia, *Proceedings of Pakistan Academy of Sciences*, Vol. 51. No.2: 171-

60. Ihtaram ul Haq, Hussain M, Iqbal MJ (2016), Large Time Step Behaviour with Different Entropy Fix, *Proceedings of Pakistan of Academy of Sciences*, Vol 53(2):213-224
61. Ali M, Iqbal MJ and Aziz Z (2016), Application of Bayesian Monte Carlo Technique to Calculate Extreme Rainfall over Sindh Province with Maximum Likelihood Method , *Proceedings of Pakistan of Academy of Sciences*, Vol 53(2):225-235
62. Naz S, MJ Iqbal, SM Akhter, I Hussain (2016), The Gumbel Mixed Model for Flood Frequency Analysis of Tarbela, *The Nucleus* 53 (3), 171-179
63. Bhutto AQ, MJ Iqbal, MJ Baig (2017), Abrupt Intensification and Dissipation of Tropical Cyclones in Indian Ocean: A Case Study of Tropical Cyclone Nilofar – 2014, *Journal of Basic and Applied Sciences* 13, 566-576
64. Baig M J, M J Iqbal, S M F Riaz, S T Iqbal (2018), Impact of Global Warming on South Asia Low Pressure and Regional Cloud Cover, *Proceedings of Pakistan Academy of Sciences*, Vol. 55. No.3: 9- 18

### **(C) ASRB APPROVED JOURNALS**

65. Iqbal M J (2003), “Application of Artificial Neural Networks in Climatic Zonation of Pakistan”, *Asia Pacific Journal on Environment and Development*, Vol. 10, No. 2
66. M Ayub Khan Yousuf Zai, M.Rashid Kamal Ansari, Jawaid Quamar, Jawaid Iqbal and Arif Hussian (2007), “Investigating the Asymptotic Stability in the Ozone Layer Depletion for Pakistan Atmospheric region,” *International Journal of Statistical Sciences*, Vol.7, ISSN 1683-5603.
67. Iqbal M J and Quamar J (2007), “Nature of Processes Responsible for Rainfall Variability, *Asia Pacific Journal on Environment and Development* , Vol. 14, No. 2
68. Iqbal M J and Quamar J (2008), “Modelling the Impact Indian Ocean on Pakistan Summer Rainfall”, *International Journal of Statistical Sciences*, Vol. 8
69. Rashid S A, Iqbal M J and Hussain M A (2012), “Impact of North-South Shift of Azores High on Summer Precipitation over North West Europe”, *International Journal of Geosciences*

70. Hussain M A, Iqbal M J and Soomro S (2012), “Urban Wind Speed Analysis in Global Climate Change Perspective: *Karachi as a Case Study*”, *International Journal of Geosciences*, Vo. 3: 992–999, Vo. 3: 1000–1010, Vo. 3: 992–999.
71. Baig M J, M J Iqbal, S.Naz (2018), Impact of Seasonal low on Sea Level Rise, *International Journal of Geosciences*, Vol. 8, 29-38
72. Baig M J, M J Iqbal, M. Shamshir, T A Siddiqui, S Naz (2019), Low Pressure Change And Agriculture Growth: Case Study for Localize Rainfall Impact Assessment, *Walia*, 35.(1), 27-

#### **(D) Other Local Journals and Conferences**

73. Iqbal M J and Quamar J (2007), “Impact of Solar Spin on Planetary Orbits, *Journal of Research (Science)*, Bahauddin Zakariya University, Vol. 18
74. Ali M, Iqbal MJ and Sharif M (2013), Relationship between Extreme Temperature and Electricity Demand in Pakistan, *International Journal of Energy and Environment Engineering*, Vol. 4. No.36
75. Farrukh S, Ilyas N, Iqbal M J & Khan A M (2015), Variations in the Dose Profiles of Physical and Virtual Wedge Filters of ONCOR Linear Accelerator, *Journal Of Medical Imaging And Radiation Sciences*, Vol 46, DOI: 10.1016/j.jmir.2015.09.004
76. Iqbal M J (2001), “Modelling of Monsoon Rainfall of Pakistan and its impact on food grain production”, *Proceedings of 7<sup>th</sup> Islamic Countries Conference on Statistical Analysis*, ISOSS/ University of Lahore, Lahore
77. Yousufzai M A K, Quamar J, Hussain M A and Iqbal M J (2003), “Investigating the Markovian Structure in Ozone Layer Depletion”, *Riazi, The Journal of Karachi Mathematical Association*, Vol. 25
78. YousufZai M A K , Quamar J, Ansari M R K, Iqbal M J and Hussain M A (2006), ‘Environmental Crisis! What Crisis?’, *Physics in Developing Countries: Past, Present and Future*, COMSATS
79. YousufZai M A K , Quamar J, Ansari M R K, Iqbal M J and Hussain M A (2007), “Investigating the Correlational Structures of UV Radiation for Marine Ecosystem due to Ozone Layer Depletion at Pakistan's atmospheric region”, *Recent Advances in Space Technologies, 2007. RAST '07* , IEEE

## Ph.D. STUDENT SUPERVISED

| <b>S. No.</b> | <b>Name of Student</b> | <b>Title of Thesis</b>   | <b>Year</b> |
|---------------|------------------------|--|-------------|
| 1.            | Saqib-ur-Rehman        | Modelling the Impact of Indian Ocean High Pressure on Western Australian Climate Variability and Stream flow | 2012        |
| 2.            | Mirza Jawwad Baig      | Impact of Global Warming on Climate of South Asia  | 2015        |
| 3.            | Muhammad Ali           | Extreme Events in Changing Climate of Pakistan   | 2016        |
| 4.            | Syed Fahad Riaz        | Impact of Siberian High on Climate of Pakistan   | 2016        |
| 6.            | Saba Naz               | Bivariate Flood Frequency Analysis of Indus River using Copula and Gumbel Mixed Models                       | 2018        |
| 7.            | Tanveer Ahmad Siddiqui | Fuzzy Modelling of River Flood of Indus River  | 2018        |
| 8.            | Zaeem Ahmed            | Development of Agroclimatic Models for Estimation of Crop Production in Pakistan                             | 2019        |
| 9.            | Shahnilla Haider       | Urban Heat Island across the Coastal Areas of Pakistan   | 2020        |
| 10.           | Syed Faisal ur Rehman  | Constraining Dark Energy Through Distance Ladders & Continuum Surveys  | 2022        |
| 11            | Ateeq Razzaq           | Estimation of Solar Radiation in Coastal Region of Pakistan  | 2023        |

|     |                     |   |      |
|-----|---------------------|---|------|
| 12  | Abdul Qayyum Bhutto | Abrupt Intensification and Dissipation Of Tropical Cyclones in Arabian Sea  | 2023 |
| 13  | Matteulhaq          | Assessment of Climate Change Evidence in Hunza and Astrore Basins   | 2023 |
| 14. | Muhammad Adeel      | Examining the Impact of Sea Surface Temperature and Sea Level Pressure on Climate Variability using SVD Anaalysis | 2024 |
| 15. | Maqsood Alam        | The Role of Turbulent Heat Fluxes   | 2024 |
| 16. | Syed Arsalan        | Spatial Analysis for the Production Of Biofuel as a Source of Renewable Energy In Pakistan                        | 2025 |

### **M.Phil. STUDENT SUPERVISED**

| <b>S. No.</b> | <b>Name of Student</b>  | <b>Title of Thesis</b>   | <b>Year</b> |
|---------------|-------------------------|--|-------------|
| 1             | Naeem Sadiq             | Classification of Weather at Karachi Region  | 2008        |
| 2             | Amyr Akber Samani       | Modulation of the Intraseasonal Rainfall over Lahore by Madden-Julian Oscillation  | 2008        |
| 3             | Muhammad Saleem Khan    | Investigation of Chaos Existence in the Time Series of Lahore Precipitation  | 2008        |
| 4             | Khan Alam               | Aerosol-Cloud Interaction over Pakistan  | 2008        |
| 5             | Gulzar Khan             | Flood Hazard Assessment and Mitigation along River Indus Using Satellite Images  | 2008        |
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