

Curriculum Vitae: Dr. Khan Alam

Associate Professor



Affiliation: Department of Physics, University of Peshawar, Pakistan.
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Academics Education:

2008-2011 Ph.D in Physics (Atmospheric Physics)
2005-2008 M.Phil in Space and Planetary Astrophysics
1999-2001 M.Sc. in Physics
1996-1998 B.Sc. in Physics and Mathematics

Research Interest:

- Measurements and characterization of Atmospheric aerosol
- Interaction of Solar radiation with atmospheric aerosol
- Characterization of Particulate Matter
- Cloud micro and macro physics
- Aerosol-Cloud-Precipitation Interaction
- Aerosol Optical and Radiative properties
- Aerosol effects on climate
- Aerosol impact on air quality and human health
- Dust physical, optical and radiative properties
- Satellite Remote Sensing of Aerosols and clouds (MODIS, MISR, TOMS, OMI, CALIPSO)
- Surface Ozone and its precursor gases
- Urban heat assessment
- Laser optics and its medical application
- Sources, characterization and morphology of particulate matter

Journal Publications:

1. Anwar, K., **Alam, K.**, Liu, Y., Huang, Z., Huang, J., & Liu, Y. (2022). Analysis of aerosol cloud interactions with a consistent signal of meteorology and other influencing parameters. *Atmospheric Research*, 106241. [**I.F: 5.369**].
2. Zeb, B., **Alam, K.**, Ditta, A., Ullah, S., Ali, H. M., Ibrahim, M., & Salem, M. Z. (2022). Variation in Coarse Particulate Matter (PM10) and Its Characterization at Multiple Locations in the Semi-arid Region. *Frontiers in Environmental Science*, 36. [**I.F: 4.581**].
3. Usman, F., Zeb, B., **Alam, K.**, Huang, Z., Shah, A., Ahmad, I., & Ullah, S. (2022). In-Depth Analysis of Physicochemical Properties of Particulate Matter (PM10, PM2.5 and PM1) and Its Characterization through FTIR, XRD and SEM-EDX Techniques in the Foothills of the Hindu Kush Region of Northern Pakistan. *Atmosphere*, 13, 124. [**I.F: 2.686**].

4. Gharibzadeh, M., Bidokhti, A.A., **Alam, K.** (2021). The interaction of ozone and aerosol in a semi-arid region in the Middle East: Ozone formation and radiative forcing implications. *Atmospheric Environment*, 245, 118015. [**I.F: 4.798**].
5. Sarwar, F., **Alam, K.**, Chow, C. W., Malik, R. N. (2021). Pulmonary Dysfunction Augmenting Bacterial Aerosols in Leather Tanneries of Punjab, Pakistan. *International Journal of Chronic Obstructive Pulmonary Disease*, 16, 2925–2937. [**I.F: 3.355**].
6. Wang, P., Mihaylova, L., Munir, S., Chakraborty, R., Wang, J., Mayfield, M., **Alam, K.**, Khokhar, M.F. and Coca, D. (2021). A computationally efficient symmetric diagonally dominant matrix projection-based Gaussian process approach. *Signal Processing*, 183, 108034. [**I.F: 4.662**].
7. Wang, P., Mihaylova, L., Chakraborty, R., Munir, S., Mayfield, M., **Alam, K.**, ... & Fang, H. (2021). A Gaussian Process Method with Uncertainty Quantification for Air Quality Monitoring. *Atmosphere*, 12(10), 1344. [**I.F: 2.686**].
8. Karami, S., Hamzeh, N. H., **Alam, K.**, Noori, F., & Abadi, A. R. S. (2021). Spatio-temporal and synoptic changes in dust at the three islands in the Persian Gulf region. *Journal of Atmospheric and Solar-Terrestrial Physics*, 214, 105539. [**I.F: 1.735**].
9. Karami, S., Hamzeh, N. H., Rashki, A., Kaskaoutis, D., **Alam, K.**, Ranjbar, A. (2021). Numerical simulations of dust storms originated from dried lakes in central and south Asia: the case of Areal Sea and Sistan basin. *Aeolian Research*, 50, 100679. [**I.F: 3.336**].
10. Rizvi, S. H., **Alam, K.**, Fatima, H., Iqbal, M. J. (2021). The Surface Urban Heat Island Intensity and Urban Expansion: A Comparative Analysis for the Coastal Areas of Pakistan. *Environment, Development and Sustainability*, 23, 5520-5537. [**I.F: 3.219**]
11. Ifthikhar, M., **Alam, K.**, Syed, W. A., Ahmad, M., Zeb, B., Liu, Y., Gulistan, N. (2021). Contrasting changes in cloud optical properties and the influence of aerosols, meteorology and radiation feedback in the Himalaya Karakoram region. *Atmospheric Research*, 248, 105210. [**I.F: 5.369**]
12. Yazdani, M., Baboli, Z., Maleki, H., Birgani, Y. T., Zahiri, M., Chaharmahal, S. S. H., **Alam, K.** ... & Goudarzi, G. (2021). Contrasting Iran's air quality improvement during COVID-19 with other global cities. *Journal of Environmental Health Science and Engineering*, 19(2), 1801-1806. [**I.F: 2.130**]
13. Ahmad, M., Tariq, S., **Alam, K.**, Anwar, S., Ikram, M. (2020). Long-term variation in aerosol optical properties and their climatic implications over major cities of Pakistan. *Journal of Atmospheric and Solar-Terrestrial Physics*, 210, 105419. [**I.F: 1.735**].
14. Ahmad, M., **Alam, K.**, Tariq, S. (2020). Contrasting changes in snow cover and its sensitivity to aerosol optical properties in Hindukush-Karakoram-Himalaya region. *Science of the Total Environment*, 699, 134356. [**I.F: 7.963**]
15. Zeb, B., **Alam, K.**, Nasir, J., Mansha, M., Ahmad, I., Bibi, S., Malak, S. M., Ali, M. (2020). Black Carbon Aerosol Characteristics and Radiative Forcing Over the High Altitude Glacier Region of Himalaya-Karakorum-Hindukush. *Atmospheric Environment*, 238, 117711. [**I.F: 4.798**]
16. Rizvi, S. H., Iqbal, M. J., Fatima, H., **Alam, K.** (2020). The Effect of Urbanization on the Intensification of SUHIs: Analysis by LULC on Karachi. *Journal of Atmospheric and Solar-Terrestrial Physics*, 207, 105374. [**I.F: 1.735**].
17. Luo, M., Liu, Y., Zhu, Q., Tang, Y., & **Alam, K.** (2020). Role and Mechanisms of Black Carbon Affecting Water Vapor Transport to Tibet. *Remote Sensing*, 12, 231. [**I.F: 4.848**]
18. Liu, Zhu, Q., Hua, S., **Alam, K.**, Dai, T., Cheng, Y. (2020). Tibetan Plateau driven impact of Taklimakan dust on northern rainfall. *Atmospheric Environment*, 234, 117583. [**I.F: 4.798**]

19. Zhang, X., Chen, S., Kang, L., Yuan, T., Luo, Y., **Alam, K.**, Li, J., He, Y., Bi, H., Zhao, D. (2020). Direct radiative forcing induced by light-absorbing aerosols in different climate regions over East Asia. *Journal of Geophysical Research: Atmospheres*, 125, e2019JD032228. DOI:10.1029/2019JD032228. [**I.F: 4.26**]
20. Khan, N., **Alam, K.**, Seema, H., Samreen, A., & Zeb, B. (2020). Fabrication of graphene oxide coated quartz filter paper for enhanced adsorption of particulate matter. *Applied Optics*, 59, 463-468. [**I.F: 1.961**]
21. Alvi, M. U., Kistler, M., Shahid, I., **Alam, K.**, Chishtie, F., Mahmud, T., & Kasper-Giebl, A. (2020). Composition and source apportionment of saccharides in aerosol particles from an agro-industrial zone in the Indo-Gangetic Plain. *Environmental Science and Pollution Research*, 27, 14124–14137. [**I.F: 4.223**]
22. Karami, S., Hamzeh, N. H., **Alam, K.**, Ranjbar, A. (2020). The study of a rare frontal dust storm with snow and rain fall: Model results and ground measurements. *Journal of Atmospheric and Solar-Terrestrial Physics*, 197, 105149. [**I.F: 1.735**].
23. Alvi, M. U., Mahmud, T., Kistler, M., Kasper-Giebl, A., Shahid, I., **Alam, K.**, Chishtie, F., Mitu, L. (2020). Elemental Composition of Particulate Matter in South-Asian Megacity (Faisalabad-Pakistan): Seasonal Behaviors, Source Apportionment and Health Risk Assessment. *Revista de Chimie*, 71, 288-301. [**I.F: 1.755**]
24. Ahmad, M., **Alam, K.**, Tariq, S. (2019). Estimating fine particulate concentration using a combined approach of linear regression and artificial neural network. *Atmospheric Environment*, 219, 117050. [**I.F: 4.798**]
25. Alvi, M. U., Kistler, M., Mahmud, T., Shahid, I., **Alam, K.**, Chishtie, F., ... & Kasper-Giebl, A. (2019). The Composition and Sources of Water Soluble Ions in PM10 at an Urban Site in the Indo-Gangetic Plain. *Journal of Atmospheric and Solar-Terrestrial Physics*, 196, 105142. [**I.F: 1.735**]
26. Shaheen, K., Shah, Z., Suo, H., Liu, M., Ma, L., **Alam, K.**, ... & Khan, S. A. (2019). Aerosol clustering in an urban environment of Beijing during (2005–2017). *Atmospheric Environment*, 213, 534-547. [**I.F: 4.798**]
27. Nasir, J., Zeb, B., Sorooshian, A., Mansha, M., **Alam, K.**, Ahmad, I., Haider, H., Shafique, M. (2019). Spatio-Temporal Variations of Absorbing Aerosols and their Relationship with Meteorology over Four High Altitude Sites in Glaciated Region of Pakistan. *Journal of Atmospheric and Solar-Terrestrial Physics*, 190, 84-95. [**I.F: 1.735**].
28. Rizvi, S. H., **Alam, K.**, & Iqbal, M. J. (2019). Spatio-temporal variations in urban heat island and its interaction with heat wave. *Journal of Atmospheric and Solar-Terrestrial Physics*, 185, 50-57. [**I.F: 1.735**].
29. Zeb, B., **Alam, K.**, Sorooshian, A., Chishtie, F., Ahmad, I., & Bibi, H. (2019). Temporal characteristics of aerosol optical properties over the glacier region of northern Pakistan. *Journal of Atmospheric and Solar-Terrestrial Physics*, 186, 35-46. [**I.F: 1.735**].
30. Gharibzadeh, M., **Alam, K.**, Abedini, Y., Biokhti, A. A., Masoumi, A., Bibi, H., Zeb, B. (2019). Climatological analysis of the optical properties of aerosols and their direct radiative forcing in the Middle East. *Journal of Atmosphere and Solar Terrestrial Physics*, 183, 86-98. [**I.F: 1.735**].
31. Riaz, R., Ali, U., Li, J., Zhang, G., **Alam, K.**, Sweetman, A. J., Jones, K. V., Malik, R. N. (2019). Assessing the level and sources of Polycyclic Aromatic Hydrocarbons (PAHs) in soil and sediments along Jhelum riverine system of lesser Himalayan region of Pakistan. *Chemosphere*, 216, 640-652. [**I.F:7.086**]

32. **Alam, K.**, Khan, R., Sooroshian, A., Blaschke, T., Bibi, S., Bibi, H. (2018). Analysis of aerosol optical properties due to a haze episode in the Himalayan foothills: Implications for climate forcing. *Aerosol Air Quality Research*, 18, 1331-1350. [**I.F:3.063**]
33. Sarwar, F., Malik, R. N., Chow, C. W., **Alam, K.** (2018). Occupational exposure and consequent health impairments due to potential incidental nanoparticles in leather tanneries: An evidential appraisal of south Asian developing countries. *Environment International*, 117, 164-174. [**I.F:9.621**]
34. Gharibzadeh, M., **Alam, K.**, Abedini, Y., Biokhti, A. A., Masoumi, A., Bibi, H. (2018). Characterization of aerosol optical properties using multiple clustering techniques over Zanjan, Iran, during 2010-2013. *Applied Optics*, 57,2881-2889. [**I.F: 1.791**]
35. Shahid, I., Alvi, M. U., Shahid, M. Z., **Alam, K.**, Chishtie, F. (2018). Source apportionment of PM at an Urban Site of a South Asian Mega City. *Aerosol Air Quality Research*, 18, 2498-2509. [**I.F:3.063**]
36. Zeb, B., **Alam, K.**, Sooroshian, A., Blaschke, T., Ahmad, I., Shahid, I. (2018). On the Morphology and Composition of Particulate Matter in an Urban Environment. *Aerosol Air quality research*, 18, 1431-1447. [**I.F:3.063**]
37. Ifthikhar, M., **Alam, K.**, Sorooshian, A., Syed, W. A., Bibi, S., Bibi, H. (2018). Contrasting aerosol optical and radiative properties between dust and urban haze episodes in megacities of Pakistan. *Atmospheric Environment*, 173, 157-172. [**I.F: 4.798**]
38. Bibi, S., **Alam, K.**, Chishistie, F., Bibi, H, Rahman, S. (2017). Observations of Black Carbon Aerosols characteristics over an urban environment: Radiative forcing and related implications. *Science of the Total Environment*, 603-604, 319-329. [**I.F: 7.963**]
39. Gharibzadeh, M., **Alam, K.**, Abedini, Y., Biokhti, A. A., Masoumi, A. (2017). Monthly and seasonal variations of aerosol optical properties and direct radiative forcing over Zanjan, Iran. *Journal of Atmosphere and Solar Terrestrial Physics*, 164, 268-275. [**I.F: 1.735**]
40. Bibi, H., **Alam, K.**, Bibi, S. (2017). Estimation of shortwave direct aerosol radiative forcing at four locations on the Indo-Gangetic Plains: Model results and ground measurement. *Atmospheric Environment*, 163, 166-181. [**I.F: 4.798**]
41. Bibi, S., **Alam, K.**, Chishtie, F., Bibi, S. (2017). Characterization of absorbing aerosol types using ground and satellites based observations over an urban environment. *Atmospheric Environment*, 150, 126-135. [**I.F: 4.798**]
42. Bibi, S., **Alam, K.**, Chishtie, F., Bibi, S., Rahman, S. (2017). Temporal variation of Black Carbon concentration using Aethalometer observations and its relationship with meteorological variables in Karachi, Pakistan. *Journal of Atmosphere and Solar Terrestrial Physics*, 157-158, 67-77. [**I.F: 1.735**]
43. Gharibzadeh, M., **Alam, K.**, Biokhti, A. A., Abedini, Y., Masoumi, A. (2017). Radiative effects and optical properties of aerosol during two dust events in 2013 over Zanjan, Iran. *Aerosol Air quality research*, 17, 888-898. [**I.F:3.063**]
44. Bibi, H., **Alam, K.**, Bibi, S. (2016). In-depth discrimination of aerosol types using multiple clustering techniques over four locations in Indo-Gangetic plains. *Atmospheric Research*, 181, 106-114. [**I.F: 5.369**]
45. **Alam, K.**, Shaheen, K., Blaschke, T., Chishtie, F., Khan, H. U., Haq, B. S. (2016). Classification of aerosols in an urban environment on the basis of optical measurements. *Aerosol Air quality research*, 16, 2535-2549. [**I.F:3.063**]

46. Bibi, H., **Alam, K.**, Bibi, S. Blaschke, T., Iqbal, M.J. (2016). Long-term (2007-2013) analysis of aerosol optical properties over four locations in the Indo-Gangetic plains, *Applied Optics*, 55, 6199-6211. [**I.F: 1.791**]
47. Haq, B. S., Khan, H., **Alam, K.**, Attaullah, S., Memoona, S. (2016). Weak two-photon absorption applied to rapid prototyping of cell scaffolds. *Applied Optics*, 55, 228-235. [**I.F: 1.791**].
48. Majid, H., W.-H, R., Madl, P., Hofmann, W., **Alam, K.** (2016). Effect of Oral Pathway on Charged Particles Deposition in the Human Bronchial Airways. *Journal of Aerosol Medicine and Pulmonary Drug Delivery*, 29, 24-29. [**I.F:2.849**]
49. Haq, B. S., Attaullah, S., Shakoor, A., Khan, H. U., **Alam, K.**, Shaheen, K. (2016). Characterization and efficacy of ultra-fast Laser pulses for biomedical applications. *Journal of Engineering and Applied Science*, 35, 67-76.
50. Haq, B. S., Attaullah, S., Shakoor, A., Khan, H. U., Shaheen, K., **Alam, K.** (2016). Two-Photon fluorescence excitation cross-section of photosensitizer thioxanthone to fabricate cell scaffold for biomedical applications. *Journal of Engineering and Applied Science*, 35, 63-67.
51. **Alam, K.**, Rahman, N., Khan, H. U., Bibi, S. (2015). Particulate matter and its source apportionment in Peshawar, Northern Pakistan. *Aerosol Air quality research*, 15, 634-647. [**I.F:3.063**]
52. Sharif, F., **Alam, K.**, Afsar, S. (2015). Spatio-temporal distribution of aerosol and cloud properties over Sindh using MODIS satellite data and a HYSPLIT model. *Aerosol Air quality research*, 15, 657-672. [**I.F:3.063**]
53. Bibi, H., **Alam, K.**, Chishtie, F., Bibi, S., Shahid, I., Blaschke, T. (2015). Intercomparison of MODIS, MISR, OMI, and CALIPSO aerosol optical depth retrievals for four locations on the Indo-Gangetic plains and validation against AERONET data. *Atmospheric Environment*, 111, 113-126. [**I.F:4.798**].
54. **Alam, K.**, Khan, R., Ali, S., Ajmal, M., Khan, G., Wazir, M., Azmat, M. (2015). Variability of aerosol optical depth over Swat in northern Pakistan based on satellite data. *Arabian Journal of Geosciences*, 8, 547-555. [**I.F: 1.827**]
55. Khan, H.U., **Alam, K.**, Mateenullah, M., Blaschke, T., Haq, B.S. (2015). Synthesis and characterization of solid solution $\text{Ag}(\text{Nb}_x\text{Ta}_{1-x})\text{O}_3$ ($x = 0, 0.25, 0.5, 0.75, 0.1$). *Journal of the European Ceramic Society*, 35, 2775-2789. [**I.F:4.029**].
56. Haq, B. S., Khan, H., **Alam, K.**, Ajmal, M., Attaullah, S., Zari, I. (2015). Determination of two-photon absorption cross sections of photosensitizers and its implications for two-photon polymerization. *Applied Optics*, 54, 132-140. [**I.F: 1.791**].
57. Haq, B. S., Khan, H., **Alam, K.**, Ajmal, M., Attaullah, S., Zari, I., Mateenullah, M. (2015). Study of the two-photon excitation of photoinitiator in various solvents, and the two-photon polymerization process. *Applied Optics*, 54, 7020-7026. [**I.F: 1.791**].
58. Haq, B. S., Khan, H., **Alam, K.**, Attaullah, M., Attaullah, S., Zari, I. (2015). Femtosecond pulsed laser ablation of polyimide at oblique angles for medical applications. *Applied Optics*, 54, 7413-7418. [**I.F: 1.791**].

59. Haq, B. S., Khan, H., Dou, Y., **Alam, K.**, Attaullah, S., Zari, I. (2015). Keratin film ablation for the fabrication of brick and mortar skin structure using femtosecond laser pulses. *Applied Physics A*, 120, 1415-1425. [**I.F: 2.584**].
60. Muhammad, W., Ullah, A., Hussain, A., Ali, N., Alam, K., Khan, G., Matiullah., Maeng, S., Lee, S. H. (2015). Some Folded Issues Related to Over-shielded and Unplanned Rooms for Medical Linear Accelerators - A Case Study. *Journal of the Korean Physical Society*, 67, 599-607. [**I.F: 0.649**].
61. **Alam, K.**, Mukhtar, A., Shahid, I., Blaschke, T., Majid, H., Rahman, S., Khan, R., Rahman, N. (2014). Source apportionment and characterization of Particulate Matter (PM₁₀) in urban environment of Lahore. *Aerosol & Air Quality Research*, 14, 1851-8161. [**I.F:3.063**]
62. **Alam, K.**, Sahar, N., Iqbal, Y., (2014). Aerosol Characteristics and Radiative Forcing during Pre-monsoon and Post-monsoon in an Urban Environment. *Aerosol & Air Quality Research*, 14, 99-107. [**I.F: 3.063**]
63. **Alam, K.**, Trautmann, T., Blaschke, T., Subhan, F. (2014). Changes in aerosol optical properties due to dust storm in the Middle East and Southwestern Asia. *Remote Sensing of the Environment*,143, 216-227. [**I.F: 10.164**]
64. **Alam, K.**, Khan, R., Blaschke, T., Mukhtiar, A. (2014). Variability of Aerosol Optical Depth and their impact on cloud properties in Pakistan. *Journal of Atmosphere and Solar Terrestrial Physics*, 107, 104-112. [**I.F: 1.735**]
65. **Alam, K.**, Madl, P., Trautmann, T., Blaschke, T., Iqbal, M.J. (2014). Retrieval of aerosol properties from surface measurements in an urban environment. *Aerosol & Air Quality Research*, 14, 686-696. [**I.F: 3.063**]
66. Hussain, M., **Alam, K.**, Madl, P. (2013). Exposure assessment and associated lung deposition calculations for vehicular exhaust in four metropolitan cities of Pakistan. *Environmental monitoring and assessment*,185,5265-5276. [**I.F: 2.513**]
67. **Alam, K.**, Trautmann, T., Blaschke, T., Hussain, M. (2012). Aerosol optical and radiative properties during summer and winter seasons over Lahore and Karachi. *Atmospheric Environment*, 50, 234-245. [**I.F: 4.798**]
68. Hussain, M., Madl, P., Hofmann, W., **Alam, K.** (2012). Implementation of charged particles deposition in stochastic lung model and calculation of enhanced deposition. *Aerosol Science and Technology*, 46, 547-554. [**I.F: 2.34**]
69. Muhammad, W., Lee, S. H., **Alam, K.**, Maqbool, M., Khan, G. (2012). Dose non-linearity of the dosimetry system and possible monitor unit error on medical linear accelerator used in conventional and intensity-modulated radiation therapy. *Journal of Nuclear Technology & Radiation Protection*, 27, 368-373. [**I.F: 1.057**]
70. Hussain, M., Madl, P., **Alam, K.** (2012). Ambient air quality with emphasis on roadside junctions in metropolitan cities of Pakistan and its potential health effects. *The Health* 3(3), 79-85.

71. **Alam, K.**, Blaschke, T., Madl, P., Mukhtar, A., Hussain, M., Trautmann, T., Rehman, S. (2011). Aerosol size distribution and mass concentration measurements in various cities of Pakistan. *Journal of Environmental Monitoring*, 13, 1944-1952. [I.F: 4.238]
72. **Alam, K.**, Trautmann, T., Blaschke, T. (2011). Aerosol Optical Properties and radiative forcing over mega city Karachi. *Atmospheric Research*, 101, 773-782. [I.F: 5.369]
73. **Alam, K.**, Qurashi, S., and Blaschke, T. (2011). Monitoring spatio-temporal aerosol patterns over Pakistan based on MODIS, TOMS and MISR satellite data and a HYSPLIT model. *Atmospheric Environment*, 45, 4641-4651. [I.F: 4.798]
74. Hussain, M., Madl, P., **Alam, K.** (2011). Review: Lung deposition predictions of airborne particles and the emergence of contemporary diseases Part-1. *The Health* 2(2), 51-59.
75. **Alam, K.**, Iqbal, M. J., Blaschke, T., Qureshi, S., and Khan, G. (2010). Monitoring spatio-temporal variations in aerosols and aerosol-cloud interactions over Pakistan using MODIS data. *Advances in Space Research*, 46, 1162-1176. [I.F: 1.746].

Conference Proceedings:

1. **Alam, K.**, Ahmad, M. (2019). Contrasting variation in aerosol optical properties during dust episodes in the Middle East and Southwest Asia: Model results and ground measurement. Central Asian DUst Conference (CADUC), 8-12 April, Dushanbe, Tajikistan.
2. **Alam, K.** Bibi, S. (2018). Variability of aerosol optical properties during dust episodes: Implication to climatic impacts. Second International conference on Dust, 25-27 April, Ilam, Iran.
3. **Alam, K.** Bibi, S., Khan, R. (2016). Dust characteristics and radiative properties: Implication to climatic impacts. First International conference on Dust, 2-4 March, Ahvaz, Iran.
4. **Alam, K.**, Khan, R. (2013). Seasonal variability of aerosol over various cities of Pakistan. 2nd International Conference on Environmental Hazards, 29-30 Oct. 2013, Tehran, Iran.
5. **Alam, K.**, Trautmann, T., and Blaschke, T. (2012). Aerosol characteristics and radiative forcing during summer and winter seasons over Pakistan. *Poster presentation European Aerosol Conference*, 2-7 Sep. 2012, Granada, Spain.
6. Norman, A.-L., Segum, A.M., Rempillo, O.T., **Alam, K.** (2011). SO₂ in the Arctic Fall Atmosphere: Source Identification using Isotope Apportionment. Poster Presentation AGU Fall meeting, 5-9 December, San Francisco, USA.
7. **Alam, K.**, Blaschke, T., Madl, P., Mukhtar, A., Trautmann, T., Hussain, M., Rahman, S. (2011). Aerosol size distribution, mass concentration and lung deposition measurement in different cities of Pakistan. *Proceedings of the European Aerosol Conference*, 4-9 Sep. 2011, Manchester, UK.
8. Trautmann, T., **Alam, K.**, and Blascke, T. (2011). Ground-based Aerosol optical properties and radiative forcing over Karachi, Pakistan. *Proceedings of the European Aerosol Conference*, 4-9 Sep. 2011, Manchester, UK

9. **Alam, K.**, and Blaschke, T. (2010). Variability of Aerosol Optical Depth over the Karachi mega city using MODIS and AERONET data. *60th Annual Meeting Austrian Physical Society*, 6-10 Sep. 2010, Salzburg, Austria, Abs. MBU-4.
10. **Alam, K.** and Blaschke, T. (2010). Variability of Aerosol and Aerosol Impact on Cloud Microphysics. *4th Environmental Physics Conference*, 10-14 March, Hurghada, Egypt.
11. **Alam, K.**, and Qureshi, S. (2009). Systematizing MODIS, TOMS and MISR satellite datasets with HYSPLIT model for monitoring regional pattern of aerosol and its seasonal variability in Pakistan. *Proceedings of the European Aerosol Conference*, 6-11 Sep. 2009, Karlsruhe, Germany, Abs. T046A11.

Invited Talks:

1. **Alam, K.** (2012). Aerosol characteristics and radiative forcing in Pakistan. First National Conference on Space Science, 8-9 October 2012, University of Karachi.
2. **Alam, K.** (2013). Changes in aerosol optical properties due to dust storm in the Middle East and Southwestern Asia. Second National Conference on Space Science, 7-8 October 2013, University of Karachi.
3. **Alam, K.** (2014). Aerosol physical and optical properties during haze episode. Institute of Space Technology, Islamabad.
4. **Alam, K.** (2016). Dust Characteristics and Radiative Properties: Implication to Climatic Impacts. First International Conference on Dust, 2-4 March, Ahvaz, Iran.
5. **Alam, K.** (2016). Dust Characteristics in South East Asia. International Workshop on Sand and Dust Storms, 4-7 October 2016, Istanbul, Turkey.
6. **Alam, K.** (2016). Aerosol Optical Characteristics in Indo-Gangetic Plains. 4th National Conference on Space Science and Technology, 7-9 October 2016, University of Karachi, Pakistan.
7. **Alam, K.** (2017). Morphological and elemental analysis of particulate matter in an urban environment. International conference on advance material & processing, 28 Feb-2Mar, Mehran University of Engineering & Technology, Jamshoro, Pakistan.
8. **Alam, K.** (2018). In-depth characterization of particulate matter in Peshawar, Pakistan. First international conference on emerging trends in material science, ICU, Peshawar, 27th February-1st March 2018.
9. **Alam, K.** (2018). Variability of aerosol optical properties during dust episodes: Implication to Climatic Impacts. 2nd International conference on dust storm 25-27 April 2018, Ilam, Iran.
10. **Alam, K.** (2019). Contrasting variation in aerosol optical properties during dust episodes in the Middle East and Southwest Asia: Model results and ground measurement. Central Asian Dust Conference 8-12 April 2019, Dushanbe, Tajikistan.

Editorial and Reviewer Board Member:

1. Journal of GeoSpace Science, University of Karachi
2. The Open Atmospheric Science Journal
3. Remote Sensing

4. Journal of Soil Science Society of Iran

PhD Thesis Supervised:

1. Humera Bibi (2017). “Quantification of aerosol properties in four locations in Indo-Gangetic plain: Implications for climatic impacts”. PhD thesis, University of Peshawar.
2. Samina Bibi (2017). “Monitoring and measurement of absorbing aerosol and its climatic implications in Karachi, Pakistan”. PhD thesis, University of Peshawar.
3. Fozia Sharif (2017). “Monitoring spatio-temporal variations and seasonal behaviour of atmospheric aerosols over Sindh, Pakistan using Geo-informatics through MODIS satellite data”. PhD thesis, University of Karachi.
4. Bahadar Zeb (2018). “Characterization, Properties and Climatic Implications of Aerosols in Northern Pakistan”. PhD thesis, University of Malakand.
5. Muhammad Iftikhar (2020). “Aerosol-Cloud Radiative Properties and Its Impact on Climate”. PhD thesis, International Islamic University, Islamabad, Pakistan.
6. Maqbool Ahmad (2020). “Monitoring spatio-temporal variation in air pollutants and their associated air quality and climatic implications in Pakistan”. PhD thesis, COMSATS University, Islamabad.
7. Shahnaila Haider Rizvi (2021). “Surface Urban Heat Island Across the Coastal Areas of Pakistan”. PhD thesis, University of Karachi

PhD Thesis Supervision in Progress:

1. Kashif Anwar. “Impact of Aerosol on Cloud Micro and Macro Physical Properties Over the Monsoon Regions of Pakistan”. PhD thesis, University of Peshawar.
2. Mateeul Haq. “Assessing runoff contribution from different sources in Hunza and Astore river basins: Climate Change Evidences”. PhD thesis, University of Karachi.
3. Saima Mohyuddin “Aerosol Characteristics in Winter Smog in Mega cities of Punjab, Pakistan: Sources identification, transport and climatic impacts”. PhD thesis, Hazara University, Mansehra.
4. Syed Shakeel Ahmad Shah. “Light absorbing aerosols over glacier region of Northern Pakistan and its climatic implication”. PhD thesis, University of Peshawar.
5. Ehtiram Ul Haq. “Characterization of aerosol physical and properties in Peshawar”. PhD thesis, University of Peshawar.
6. Nabia Gulistan. “Aerosol influence on tropospheric thermodynamics and microphysics of cumulus clouds over Indo-Gangetic Plain”.

M.Phil Thesis Supervised:

1. Naheed Rahman (2014). Aerosol particle size distribution and its source apportionment in Peshawar. M. Phil thesis, University of Peshawar.
2. Najm us Sahar (2014). Characterization of aerosol optical and radiative properties in an urban environment of Lahore using satellite and ground data. M. Phil thesis, University of Peshawar.
3. Rehana Khan (2014). To analyze aerosol-cloud interaction and its properties in different cities of Pakistan. M.Phil thesis, University of Peshawar.
4. Kausar Shaheen (2015). Classification of aerosol types on the basis of optical measurements in the urban environment of Lahore. M.Phil thesis, University of Peshawar.

5. Kashif Khan (2016). Analysis of aerosol-cloud microphysical properties in south asia using MODIS data. M.Phil thesis, University of Peshawar.
6. Maryam Faheem (2017). Analysis of cloud optical and radiative properties over Lahore and Karachi. M.Phil thesis, University of Peshawar.
7. Saira Begum (2017). Elemental and morphological investigation of aerosol pollutants in Peshawar and Faisalabad. M.Phil thesis, University of Peshawar.
8. Nadia Khan (2018). Synthesis of carbon based nano materials on quartz filter paper for environmental application. M.Phil thesis, University of Peshawar.
9. Shabnam Irum (2018). Analyzing the Relationships Between Aerosol, Cloud and Lighting Over Peshawar and Gilgit. M.Phil thesis, University of Peshawar.
10. Sheraz Ahmad (2019). Characterization of Aerosol Using an Advanced Cluster Technique Over Urban Environments of South Asia. M.Phil thesis, University of Peshawar.
11. Nabia (2019). Analysis of the Effects of Aerosols on Macro and Microphysics of Clouds Over Land and Ocean. M.Phil thesis, University of Peshawar.
12. Tanveer Ahmad (2021). The Impacts of Aerosol and Atmospheric Circulations on Cloud Microphysical Properties over Pakistan. M.Phil thesis, University of Peshawar.
13. Shafaat Ullah (2021). To Analyze Aerosol Radiation Interaction During Dust Outbreak and Their Climatic Implication in the Southern Region of Pakistan. M.Phil thesis, University of Peshawar.
14. Nayab Farooq (2021). Identification of Smoke Characteristics Using Remote Sensing Measurements. M.Phil thesis, University of Peshawar.
15. Wahab Khan (2021). Characterization of Atmospheric Aerosols Using Spaceborne LIDAR. M.Phil thesis, University of Peshawar.
16. Nazish Shehriyar (2021). Analysis of the Scattering and Absorption Properties of Mineral Dust. M.Phil thesis, University of Peshawar.

Funded Projects:

1. Satellite & ground-based aerosol characteristics in Pakistan: Implication to climatic impact. HEC start-up research grant (**0.5 million**) (Completed)
2. Assessment & Monitoring of Aerosols in Pakistan: Implication to Air Quality and Climatic Impact. HEC NRPU grant (**6.154 million**) (Completed).
3. Aerosol monitoring and impacts on air quality, human health and climate change over Peshawar using spaceborne and ground observations. Joint project of University of Peshawar and Lanzhou University (**100 million**) (In Progress)