

## **Dr. Zia ul Haq**

Designation	Assistant Professor
Institution	Remote Sensing, GIS and Climatic Research Lab, Department of Space Science, University of the Punjab, Lahore, Pakistan.
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### **Academic/Research Summary**

Academic Experience at Punjab University	15 years
Qualification	PhD in Space Science
Total Impact Factor	50.03
International Impact Factor Citations	248

### **Academic Career History**

**Assistant Professor**, Department of Space Science, University of the Punjab, Lahore, Pakistan (2010-)

**Lecturer**, Department of Space Science, University of the Punjab, Lahore, Pakistan (2005-2010)

**Principal Investigator/Director**, Remote Sensing, GIS and Climatic Research Lab, National Center of GIS and Space Applications, Pakistan (2020- )

### **Academic Qualifications**

**Ph.D. in Space Science**, University of the Punjab, Lahore, Pakistan

**M.S. in Telecommunications and Computer Networks Engineering**, London South Bank University, London, UK

**M.Sc. in Space Science**, University of the Punjab, Lahore, Pakistan

### **Research interests**

Atmospheric Physics & Chemistry, Climate Change, Climate Modeling, Remote Sensing of Atmosphere, Anthropogenic Emissions of Pollutants, Satellite Applications

### **Selected International Peer-reviewed Impact Factor Publications**

**Zia ul-Haq**, Asim Daud Rana, Salman Tariq, Khalid Mahmood, Muhammad Ali, Iqra Bashir, 2018. Modeling of tropospheric NO<sub>2</sub> column over different climatic zones and land use/land cover types in South Asia. *Journal of Atmospheric and Solar-Terrestrial Physics* 168, 80–99. (Impact Factor: 1.463).

- Zia Ul-Haq**, Zertasha Ramzan, Salman Tariq, Syeda Adila Batool, Muhammad Ali, Javed Sami, 2017. Comparison of total ozone column observations from space-borne Ozone Monitoring Instrument with ground-based Dobson Ozone Spectrophotometer measurements at an urban location in Indo-Gangetic Basin. *International Journal of Remote Sensing*, 39 (2), 544-564 (Impact Factor: 1.724).
- Zia ul-Haq**, Salman Tariq, Muhammad Ali, Asim Daud Rana, Khalid Mahmood, 2017. Satellite sensed tropospheric NO<sub>2</sub> patterns and anomalies over Indus, Ganges, Brahmaputra and Meghna river basins. *International Journal of Remote Sensing*, DOI: 10.1080/01431161.2017.1283071 (Impact Factor: 1.640).
- Zia ul-Haq**, Salman Tariq & Muhammad Ali, 2017. Spatiotemporal Patterns of Correlation between Atmospheric Nitrogen Dioxide and Aerosols over South Asia. *Meteorology and Atmospheric Physics*, DOI:10.1007/s00703-016-0485-6, (Impact Factor: 1.172).
- Zia ul-Haq**, Salman Tariq, Muhammad Ali, 2017. Spatiotemporal assessment of CO<sub>2</sub> emissions and its satellite remote sensing over Pakistan and neighboring regions. *Journal of Atmospheric and Solar-Terrestrial Physics*, DOI:10.1016/j.jastp.2016.11.001, (Impact Factor: 1.463).
- Zia ul-Haq**, Muhammad Ali, Syeda Adila Batool, Salman Tariq, Zarmina Qayyum, 2016. Emissions quantification of refrigerant CFCs, HCFCs and HFCs in megacity Lahore (Pakistan) and contributed ODPs and GWPs. *Journal of Earth System Science*, 125(6), 1273-1284, DOI:10.1007/s12040-016-0724-8. (Impact Factor: 0.858).
- Zia ul-Haq**, Salman Tariq, Muhammad Ali, Khalid Mahmood, Asim Daud Rana, 2016. Sulphur dioxide loadings over megacity Lahore (Pakistan) and adjoining region of Indo-Gangetic Basin. *International Journal of Remote Sensing*, 37(13), 3021-3041, DOI:10.1080/01431161.2016.1192701. (Impact Factor: 1.640).
- Zia ul-Haq**, Salman Tariq, Muhammad Ali, 2016. Anthropogenic emissions and space-borne observations of carbon monoxide over South Asia. *Advances in Space Research*, 58, 1610-1626 (Impact Factor: 1.409).
- Zia ul-Haq**, Salman Tariq, Muhammad Ali, 2015. Atmospheric variability of methane over Pakistan, Afghanistan and adjoining areas using retrievals from SCIAMACHY/ENVISAT. *Journal of Atmospheric and Solar-Terrestrial Physics*, 135, 161-173, DOI: 10.1016/j.jastp.2015.11.002. (Impact Factor: 1.463).
- Zia ul-Haq**, Salman Tariq, Muhammad Ali, 2015. Tropospheric NO<sub>2</sub> trends over South Asia during the last decade (2004-2014) using OMI data. *Advances in Meteorology*, 959284, 18 (Impact Factor: 1.107).
- Zia ul-Haq**, Asim Daud Rana, Muhammad Ali, Khalid Mahmood, Salman Tariq, Zarmina Qayyum, 2015. Carbon monoxide (CO) emissions and its tropospheric variability over Pakistan using satellite-sensed data. *Advances in Space Research*, 56, 583-595, DOI:10.1016/j.asr.2015.04.026. (Impact Factor: 1.409).
- Zia ul-Haq**, Salman Tariq, Asim Daud Rana, Muhammad Ali, Khalid Mahmood, Shahid Parvez, 2015. Satellite remote sensing of total ozone column (TOC) over Pakistan and neighbouring regions. *International Journal of Remote Sensing*, 36(4), 1038-1054, DOI: 10.1080/01431161.2015.1007255. (Impact Factor: 1.640).

- Zia ul-Haq**, Salman Tariq, Muhammad Ali, Khalid Mahmood, Syeda Adila Batool, Asim Daud Rana, 2014. A study of tropospheric NO<sub>2</sub> variability over Pakistan using OMI data. *Atmospheric Pollution Research*, 5(4), 709-720, DOI: 10.5094/APR.2014.080. (Impact Factor: 1.401).
- Zia ul-Haq**, Syeda Adila Batool, Salman Tariq, Asim Daud Rana, Khalid Mahmood, Muhammad Nawaz Chaudhary, 2018. Temporal and spatial variations of NO<sub>2</sub> over Saudi Arabia and identification of major hotspot areas during 2005-2014 by using satellite data. *Applied Ecology and Environmental Research* (accepted for publication) (Impact Factor: 0.681).
- Salman Tariq, **Zia ul-Haq**, 2019. Investigating the Aerosol Optical Depth and Angstrom Exponent and their Relationships with Meteorological Parameters over Lahore in Pakistan. Proceedings of the National Academy of Sciences, India Section A: Physical Sciences, <https://doi.org/10.1007/s40010-018-0575-6>, ISSN: 0369-8203 (Print) 2250-1762 (Online). (Impact factor 0.681)
- Asim Daud Rana, Shahid Parvez, **Zia ul-Haq**, Syeda Adila Batool, Chaudhary, M. N.– Mahmood, K., Salman Tariq, 2019. Anthropogenic, Biogenic And Pyrogenic Emission Sources And Atmospheric Formaldehyde (HCHO) And Nitrogen Dioxide (NO<sub>2</sub>) Columns Over Different Landuse/Landcovers Of South Asia, *Applied Ecology and Environmental Research*, ISSN 1589 1623, (Impact Factor 0.681).
- Shahid Parvez, Asim Daud Rana, **Zia ul-Haq**, Syeda Adila Batool, Ali, M., Salman Tariq, Mahmood, K., Bano, S., 2019. Investigating Contributions of Gases, Meteorological Parameters, And Aerosols Towards Tropospheric Ozone Variabilities Over Megacity LAHORE (PAKISTAN), *Applied Ecology and Environmental Research*, ISSN 1589 1623, (Impact Factor 0.681).
- Khalid Mahmood, **Zia ul-Haq**, Fiza Faizi, Salman Tariq, Muhammad Azhar Naeem, Asim Daud Rana, 2019. Monitoring open dumping of municipal waste in Gujranwala, Pakistan using a combination of satellite based bio-thermal indicators and GIS analysis, *Ecological Indicators*, Volume 107, 105613, ISSN 1470-160X, <https://doi.org/10.1016/j.ecolind.2019.105613>. (Impact factor 4.49).
- Salman Tariq, **Zia ul-Haq**, 2018. Ground Based Remote Sensing of Aerosol Properties over a coastal mega-city of Pakistan, *Advances in Meteorology*, vol. 2018, Article ID 3582191, 12 pages, <https://doi.org/10.1155/2018/3582191>. (Impact factor 1.577).
- Salman Tariq, **Zia ul-Haq**, Khalid Mahmood, Asim Daud Rana, 2018. Spatio-Temporal Distributions and Trends of Aerosol Parameters Over Pakistan Using Remote Sensing. 16(3):2615-2637, DOI: [http://dx.doi.org/10.15666/aeer/1603\\_26152637](http://dx.doi.org/10.15666/aeer/1603_26152637), (Impact Factor 0.681).
- Khalid Mahmood, Syeda Adila Batool, Fiza Faizi, Ch. Muhammad Nawaz, **Zia ul-Haq**, Asim Daud Rana, Salman Tariq, 2017. Bio-thermal effects of open dumps on surroundings detected by remote sensing - influence of geographical conditions. *Ecological Indicators* 82, 131-142, <https://doi.org/10.1016/j.ecolind.2017.06.042> (Impact Factor: 3.898).

Salman Tariq, **Zia ul-Haq**, Ali Imran, Usman Mehmood, Muhammad Aslam, Kahlid Mehmood, 2017. CO<sub>2</sub> emissions from Pakistan and India and their relationship with economic variables. *Applied Ecology and Environmental Research*, 15(4), 1301-1312, DOI: [http://dx.doi.org/10.15666/aeer/1504\\_13011312](http://dx.doi.org/10.15666/aeer/1504_13011312). (Impact Factor: 0.50).

Khalid Mahmood, Adila Batool, Muhammad Nawaz, **Zia ul-Haq**, 2017. Ranking criteria for the assessment of municipal solid waste dumping sites. *Archives of Environmental Protection*. 43 (1), 95-105, DOI 10.1515/aep-2017-0009, Impact Factor 0.919.

Salman Tariq, **Zia ul-Haq**, Muhammad Ali, 2016. Satellite and ground-based remote sensing of aerosols during intense haze event of October 2013 over Lahore, Pakistan. *Asia-Pacific Journal of Atmospheric Sciences*, 52(1), 25-33. DOI: 10.1007/s13143-015-0084-3. (Impact Factor: 1.611).

Khalid Mahmood, Syeda Adila Batool, Muhammad Nawaz, **Zia ul-Haq**, 2017. Ranking criteria for the assessment of municipal solid waste dumping sites. *Archives of Environmental Protection*, 43 (1), 97-107. (Impact Factor: 0.919).

Khalid Mahmood, **Zia ul-Haq**, Syeda Adila Batool, Asim Daud Rana, Salman Tariq, 2016. Application of Temporal GIS to Track Areas of Significant Concern Regarding Groundwater Contamination. *Environmental Earth Sciences*, 75(33), DOI: 10.1007/s12665-015-4844-2. (Impact Factor: 1.765).

Salman Tariq, **Zia ul-Haq**, Muhammad Ali, 2015. Analysis of Optical and Physical Properties of Aerosols during Crop Residue Burning Event of October 2010 over Lahore, Pakistan. *Atmospheric Pollution Research*, 6, 969-978, DOI:10.1016/j.apr.2015.05.002. (Impact Factor: 1.401).

Muhammad Ali, Salman Tariq, Khalid Mahmood, Asim Daud Rana, Adila Batool, **Zia ul-Haq**, 2014. A study of aerosol properties over Lahore (Pakistan) by using AERONET data. *Asia-Pacific Journal of Atmospheric Sciences*, 50, 153-162, DOI:10.1007/s13143-014-0004-y. (Impact Factor: 1.611).

### **Book Chapter**

Salman Tariq, **Zia ul-Haq** (2018). Satellite remote sensing of aerosols and gaseous pollution over Pakistan. In Krishna Prasad Vadrevu, Toshimasa Ohara & Chris Justice (Eds.), "*Land Atmospheric Interactions in Asia*". (a project of NASA and University of Maryland, USA)-Springer Book ISBN 978-3-319-67473-5.

### **International Conference Papers Presented/Abstracts Accepted**

Salman Tariq, **Zia ul-Haq** (2016). *Aerosol optical depth and single scattering albedo variability over Arabian Sea during 2002-2015*. Climate and Ocean: Variability, Predictability and Change (CLIVAR) Open Science Conference, 19-23<sup>rd</sup> September, 2016, Qingdao, China.

Khalid Mahmood, Muhammad Asim, **Zia ul-Haq** (2015). *GIS-based ground water quality indexing in Lahore residence, Pakistan*. SMPR 2015/ISPRS International Conference on Geo-Information Modeling and Environmental Monitoring, 23-25<sup>th</sup> November 2015, University of Tehran, Kish International Campus, Kish Island, Iran.

**Zia ul-Haq**, Asim Daud Rana, Muhammad Ali, Khalid Mahmood, Salman Tariq, Zermine Qayyum (2015). *Carbon monoxide emissions and its spatial and temporal variability over Pakistan and adjoining regions using satellite data*. 3<sup>rd</sup> International Symposium on Energy Challenges and Mechanics- towards a big picture (Session 07: Energy and Environment), 7-9<sup>th</sup> July 2015, Aberdeen, Scotland, United Kingdom.

**Zia ul-Haq**, Salman Tariq, Asim Daud Rana, Khalid Mahmood, Syeda Adila Batool, Abdur Rehman, (2014). *Dubai air show 2013 and spatio-temporal study of elevated levels of tropospheric NO<sub>2</sub> over UAE region by using satellite remote sensing technique*. 2<sup>nd</sup> International Conference on Environmental Science and Technology (ICOEST '2014), 14-17<sup>th</sup> May 2014, Side, Antalya.

## **Calligraphic & Illumination Exhibitions**

### **Calligraphic & Illumination Exhibition, 2009**

Center for Conservation & Restoration Studies (CCRS), Kucha Pir Sharazi, Lohari Gate, Lahore.

### **Calligraphic & Illumination Exhibition (Solo), 2010**

Lahore City Heritage Museum, Lahore, Pakistan. Collaborated by Lahore Museum.

### **Calligraphic & Illumination Exhibition (Solo), 2010**

Alhamra Art Gallery, The Mall Road, Lahore, Pakistan. Collaborated by Lahore Arts Council.

### **Calligraphic & Illumination Exhibition, 2011**

Alhamra Art Gallery, The Mall Road, Lahore, Pakistan.

### **Calligraphic & Illumination Exhibition (Solo), 2011**

Government Postgraduate College, Gojra, Toba Tek Singh, Pakistan.

## **Professional Trainings**

- **HCFC's Phase-out and Alternatives**, Ozone Cell, Ministry of Climate Change, Lahore, Pakistan.
- **Satellite Applications in Communications and Remote Sensing**, SUPARCO & ISNET, Lahore, Pakistan.
- **Project and Team Management**, Diploma, BSY Group, UK.
- **Projects in Controlled Environments (PRINCE2)**, Foundation Certificate, Office of Government Commerce, UK.
- **Systems Analysis and Design**, BTEC diploma, University of Westminster, London.
- **Gemstones Identification**, Diploma, Pakistan Gems and Jewellery Development Company, Lahore, Pakistan.
- **Calligraphy & Illumination Course**, Center for Conservation & Restoration Studies (CCRS)-NCA, Lahore.
- **Oracle-8, Database Management**, Professional training course, UET, Lahore, Pakistan.
- **Fundamentals of Digital Signal Processing**, Professional training course, Texas Instrument, Birmingham.

- **Data communications cable installation and testing**, City & Guilds certificate, UK Telecommunications Academy.
- **Optical Fibre Installation and Testing, Single Mode**, City & Guilds certificate, UK Telecommunications Academy.
- **Network Infrastructure Installation**, Professional training course, CNS, Bandford, UK.
- **Foundation Economics**, Foundation course, London School of Economic Sciences, London, UK.
- **Optical Fibre Cable Installation and Testing**, Professional training course, CNS, Bandford, UK.
- **Network Associate, Routing and Switching**, Professional training course, CORVET Systems, Lahore, Pakistan.