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Environmental Science Centre
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EDUCATION

- 2008 - 2011 **Vienna University of Technology (TUWIEN)**, Vienna Austria
Ph.D. in Atmospheric Science; Advisor: Prof. Hans Puxbaum
Dissertation: "Characterization of carbonaceous species in atmospheric aerosols and wood smoke particles"
- 2002 - 2004 **University of Engineering & Technology, Lahore Pakistan**
M.Sc. in Applied Chemistry

RESEARCH EXPERIENCE

- October 2020 – Present **Research Associate Professor**, Environmental Science Centre, **Qatar University**, Doha Qatar
Characterization and composition of atmospheric aerosols / particulate matter. Physiochemical properties, optical properties and its climate implication. Aerosol and cloud interaction.
- Jan 2018 – Oct 2020 **Associate Professor, Institute of Space Technology**, Islamabad Pakistan
- Nov 2012 – Jan 2018 **Assistant Professor, Institute of Space Technology**, Islamabad Pakistan
- Impact planetary boundary layer on urban air quality. Measurement and analysis of particulate matter in different cities of Pakistan, Development of Atmospheric science lab at IST. Participate in field

campaigns, including winter smog studies in South Asia. Conduct atmospheric measurement studies, data processing and validation, quality control and assurance, and descriptive data analysis. Preparation of research proposals, project cost estimates, scientific journal articles, technical reports, and standard operating procedures.

2008 - 2011

PhD Scholar, *Vienna University of Technology, Vienna Austria*, Carbonaceous Species in atmospheric aerosols and wood smoke Particles, Intercomparison of measurement methods for elemental carbon measurement. Characterization of particulate matter in different cities of Pakistan.

2005 - 2008

Research Fellow, **Global Change Impact Studies Centre**, Islamabad Pakistan

GHG's and air pollutant emissions in Pakistan from different sectors, emission Inventory Development, Air pollution Dispersion modelling, Coordination with Ministry of Environment Pakistan and its activities

SUMMER 2007

Young Scientist Summer Fellow (YSSP) at **International Institute for Applied System Analysis (IIASA)**, Austria

Development of GAINS-Asia model for Pakistan, incorporating activity data and emissions in model.

AWARDS

2002 - 2004

Govt. of the Punjab Pakistan, Merit Scholarship for M.Sc. Applied chemistry

2008 - 2011

Higher Education Commission (HEC) Pakistan scholarship for Ph.D studies in Austria

PROJECTS / RESEARCH ACTIVITIES

1. “Variability of Urban Aerosols over Punjab, Pakistan using Ceilometer Lidar and its comparison with ground based measurements ” funded Higher Education Commission (HEC) Pakistan total amount 9.73M PKR. (completed)
2. *4 times open Sensing of Environment (4ONSE)* funded by Swiss National Science Foundation (SNSF), 492,000 SWF, details at <http://4onse.org/#/? k=fpvsjw> (completed)
3. “Monitoring the role of atmospheric aerosol in South Asian Winter Fog” Project funded by International Centre for Integrated Mountain Development (ICIMOD) amount US\$31100. (Completed)
4. *Vehicular emission inventory of different cities in Pakistan (Funded by Higher Education Commission Pakistan) total amount, 0.5M PKR, Completed.*
5. *Aerosol particles size and mass distribution in indoor and outdoor environment. Funded by Pakistan Space & Upper Atmospheric Commission (SUPARCO) PAKISTAN, amount 5.5M PKR, (Completed.)*

PUBLICATIONS

Journal Articles:

1. A Aslam, M Ibrahim, **I Shahid**, A Mahmood..2020 Pollution Characteristics of Particulate Matter (PM_{2.5} and PM₁₀) and Constituent Carbonaceous Aerosols in a South Asian Future Megacity. *Appl. Sci.* **2020**, 10(24), 8864.
2. MZ Shahid, **I Shahid**, M Zahid. 2020. Inter-annual variability and distribution of aerosols during winters and aerosol optical thickness over Northeastern Pakistan *International Journal of Environmental Science and Technology*, 1-14
3. N Qayyum, S Ghuffar, HM Ahmad, A Yousaf, **I Shahid**. 2020. Glacial lakes mapping using multi satellite Planet Scope imagery and deep learning. *ISPRS International Journal of Geo-Information* 9 (10), 560
4. MU.Alvi, M Kistler, **I.Shahid**, K.Alam, F Chishtie, Ta Mahmud, AK Giebl. 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

5. MU Alvi, T Manhmud, M Kistker, A K. Giebl, **I shahid**, K. Alam, F Chishtie, L. Mitu. 2020. *Elemental Composition of Particulate Matter in South-Asian Megacity (Faisalabad-Pakistan): Seasonal Behaviors, Source Apportionment and Health Risk Assessment. Revista de Chimie (Rev. Chim.) 71 (2), 288-301*
6. R. Khan, H. Gilnai, N. Iqbal, **I Shahid**. 2020. *Satellite-based (2000–2015) drought hazard assessment with indices, mapping, and monitoring of Potohar plateau, Punjab, Pakistan. Environmental Earth Sciences Vol-79 issue 1,*
7. M.U. Alvi, M. Kistler, T. Mahmud, **I. Shahid**, K Alam, F. Chishtie, R Hussain, A-Giebl. 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. Vol 196. 105142*
8. M.Z. Shahid, **I. Shahid**, F. Chishtie, G Bulul. 2018 *Analysis of a dense haze event over North-eastern Pakistan using WRF-Chem model and remote sensing. Journal of atmosphere and Solar Terrestrial Physics Vol 182, 229 - 241 (IF: 1.49)*
9. **I. Shahid**, G bulbul, M.Z. Shahid, F Chishtie, A Lodhi, and S Shafique. 2019. *Air quality status of Twin Cities of Pakistan, Atmósfera 32(1), 71-84 (IF: 1.08).*
10. A Rahman, F Chishtie, W A Qazi, S ghuffar, **I. Shahid**, K Fatima. 2018. *Evaluation of Three-Hourly TMPA Rainfall Products Using Telemetric Rain Gauge Observations at Lai Nullah Basin in Islamabad, Pakistan. Remote Sensing. 10(12), 2040 (IF: 3.4)*
11. **I. Shahid**, M Kislter, M.Z. Shahid, H.Puxbaum. 2018. *Aerosol chemical characterization and contribution of biomass burning to particulate matter at a residential site in Islamabad-Pakistan. Aerosol and Air Quality, (AAQR), Accepted Manuscript*
12. M. Awais, M. I Shahzad, M. Nazeer, I. Mahmood, S. Mehmood, M. F. Iqbal, N. Yasmin, **I. Shahid**. 2018. *Assessment of aerosol optical properties using remote sensing over highly urbanised twin cities of Pakistan Journal of Atmospheric and Solar-Terrestrial Physics, Volume 173, August 2018, Pages 37-49*

13. Zeb B., Alam K., Soroshian A., Blashke T., Iftikhar A., **Shahid I.** 2018. *On the Morphology and Composition of Particulate Matter in an Urban Environment* **Aerosol and Air Quality, (AAQR)**, Articles in Press.
14. **I. Shahid**, M U. Alvi, M. Z Shahid, K Alam, F Chishtie. 2018. *Source Apportionment of PM10 at an Urban Site of a South Asian Mega City*, **Aerosol and Air Quality, (AAQR)**, Articles in Press
15. R. Anam, F. Chishtie, S. Ghuffar, W. Qazi & **I. Shahid**. Inter-comparison of SMOS and AMSR-E soil moisture products during flood years (2010–2011) over Pakistan. **European Journal of Remote Sensing**, VOL. 50, NO. 1. 2017
16. G Bulbul, **I. Shahid**, F Chishtie. *PM10 Sampling and AOD trends during 2016 Winter Fog season in the Islamabad Region*. **Aerosol & Air Quality Research** Volume: 18, Issue: 1 Pages: 188-199
17. U. Alvi, F. Chishtie, **I. Shahid**. *A Review of Traffic & Industry-related Air Pollution Exposure Assessment in the Mega-City of Faisalabad, Pakistan*. **CLEAN - Soil, Air, Water** 2017.
18. F. Khokhar, N Yasmin, F Chishtie, **I. Shahid**. *Temporal Variability and Characterization of Aerosols across the Pakistan Region during the Winter Fog Periods*. **Atmosphere** 7 (5), 67, 2016.
19. **Shahid et al.**, 2015. *Aerosol chemical characterization and biomass burning contribution to PM10 and PM2.5 at an urban site in Karachi – Pakistan*, **ATMOSPHERIC ENVIRONMENT**, 128, 114-123, 2016
20. M. Z. Shahid, Liao Hong, Qiu yulu, **I. Shahid**, *1 Source sector contributions to aerosol levels in Pakistan*, **Atmospheric and Oceanic Science Letter**, 2015, VOL. 8, NO. 5, 308 – 313

21. M.Z. Shahid, H. Liao, J. Li, **I. Shahid**, A. Lodhi, and M. Mansha. Seasonal variations of aerosols in Pakistan: Contributions of domestic anthropogenic emissions and transboundary transport. *Aerosol and air quality Research* **15**: 1580–1600, 2015
22. H. Bibi, K. Alam, F. Chishtie, S. Bibi, **I. Shahid**; T. Blaschke. 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. 2015.
23. **Shahid et al.**, 2015 Particles emission from open burning of different types of Pakistani and Austrian wood, 121, 35 - 41, *Atmospheric Environment* 2015.
24. K Alam, A Mukhtar, **I. Shahid**, T Blaschke, H Majid. Source apportionment and characterization of particulate matter (PM10) in urban environment of Lahore. *Aerosol & Air Quality Research (AAQR)* **14**, 1851-1861. 2014.

Conference Presentation / Publication:

1. *Shahid and Farrukh Chishtie, Source apportionment of Particulate matter in a South Asian Mega City: A case study of Karachi, Presented at IAPSO-IAMAS-IAGA joint assembly, 26th August – 02 September 2017, Cape Town South Africa.*
2. *Shahid & K. Alam, Source apportionment of particulate matter pollution at Lahore Pakistan. Atmospheric Composition and the Asian Summer Monsoon (ACAM), 8 – 10 June 2015, Bangkok Thailand.*
3. *F. Chishtie & I. Shahid "Continuous air pollution monitoring: A key missing link across Pakistan" Health, Agriculture, and Water Risks Associated with Air Quality and Climate in Asia 9 July 2013 to 12 July 2013, Boulder USA.*
4. *F. Chishtie, I. Shahid & B. Ghauri "Utilizing CALIPSO observations towards studying aerosol effects on precipitation events in Pakistan" Workshop on Atmospheric Composition and the Asian Summer Monsoon (ACAM) June 9-12, 2013 in Kathmandu, Nepal.*

5. **Shahid et al.**, 2011, *Contribution of biomass smoke to particulate matter concentrations at Islamabad Pakistan. International conference of Carbonaceous species in atmosphere, 26 – 29 June 2011, Vienna Austria.*
6. **Imran Shahid**, *Air pollutants emissions in Pakistan, Proceedings of Junior Science Conference 7-9 April 2010, Vienna Austria.*
7. **Shahid et al.**, *Greenhouse gases and air pollutant emission in Pakistan. Presented at Better Air Quality Workshop, BAQ 2008 held on 10-12 November 2008, Bangkok, Thailand.*
8. **Shahid et al.**, *Effect of transboundary pollution on air quality of southeastern region of Pakistan. Presented at Better Air Quality Workshop, BAQ 2006, held on 11-13 December 2006 Yogyakarta Indonesia.*
9. **Saeed, S., I. Shahid, S. Raza**, “*Upgraded Emission Inventory of Pakistan for the Year 2005*”, *UNEP Third Training Workshop on Emissions Inventory, Scenarios and Atmospheric Transport Modeling, Oral, 28 Jan to 01 Feb, 2008. AIT, Pathumthani, Bangkok, Thailand.*