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Profile: I earned my Ph.D. degree in 2014 from the Hong Kong Polytechnic University (PolyU), Hong Kong. I have the honor to be the first Pakistani (out of 300 applicants from Pakistan) who was selected for the prestigious Hong Kong Ph.D. Fellowship in the pioneer batch of 2010. From 2014 to 2017, I worked as a Postdoctoral Fellow at PolyU, Hong Kong. In October 2017, I joined Nanjing University of Information Science and Technology as a Professor. In October 2018, the Jiangsu Provincial Education Department conferred me the special title of "Distinguished Professor" based on my outstanding research achievements. I have developed three robust methods, i.e., (i) **Simplified Aerosol Retrieval Algorithm (SARA)**, (ii) **Simplified Merge Scheme (SMS)**, and (iii) **Simplified and Robust Surface Reflectance Estimation Method (SREM)**. For more detail, please visit my following Research Profiles:

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Publications

Role	No. of Publications	Impact Factor	H-index	Citations
✷ First Author	[12]	[55.00]		
✷ Correspoding Author	[04]	[13.32]	[15]	[761]
✷ Co-Author	[27]	[101.73]		
✷ **Total**	**[43]**	**[170.05]**		

First Author:

1. Bilal et al. (2019). A Simplified and Robust Surface Reflectance Estimation Method (SREM) for Use over Diverse Land Surfaces Using Multi-Sensor Data. ***Remote Sensing***, *11*, 1344.
2. Bilal et a. (2019). Evaluation of Terra-MODIS C6 and C6.1 Aerosol Products against Beijing, XiangHe, and Xinglong AERONET Sites in China during 2004-2014. ***Remote Sensing***, 11, 486.
3. Bilal et at. (2018). Global Validation of MODIS C6 and C6.1 Merged Aerosol Products over Diverse Vegetated Surfaces. ***Remote Sensing,*** DOI: 10.3390/rs10030475.
4. Bilal et al. (2018). A New MODIS C6 Dark Target and Deep Blue Merged Aerosol Product at 3 km Spatial Resolution. ***Remote Sensing,*** DOI: 10.3390/rs10030463.
5. Bilal et al. (2017). New customized methods for improvement of the MODIS C6 Dark Target and Deep Blue merged aerosol product. ***Remote Sensing of Environment***, *197, 115-124.* DOI: 10.1016/j.rse.2017.05.028.

6. Bilal and Nichol (2017). Evaluation of the NDVI–based pixel selection criteria of the MODIS C6 Dark Target and Deep Blue combined aerosol product. ***IEEE JSTARS,*** DOI: 10.1109/JSTARS.2017.2693289**.**
7. Bilal et al. (2017). Validation of MODIS and VIIRS derived aerosol optical depth over complex coastal waters. ***Atmospheric Research,*** 186, 43-50**.** *doi:* 10.1016/j.atmosres.2016.11.009.
8. Bilal et al. (2017). A New Approach for Estimation of Fine Particulate Concentrations Using Satellite Aerosol Optical Depth and Binning of Meteorological Variables, ***Aerosol and Air Quality Research****, 17, 356–367, doi:* 10.4209/aaqr.2016.03.0097
9. Bilal et al. (2016). Validation of Aqua–MODIS C051 and C006 Operational Aerosol Products Using AERONET Measurements Over Pakistan, ***IEEE JSTARS****, 9(5), 2074-2080, doi:* 10.1109/JSTARS.2015.2481460.
10. Bilal and Nichol (2015). Evaluation of MODIS aerosol retrieval algorithms over the Beijing–Tianjin–Hebei region during low to very high pollution events, ***Journal of Geophysical Research-Atmosphere***, 120, 7941–7957, doi: 10.1002/2015JD023082.
11. Bilal et al. (2014). Validation and accuracy assessment of a Simplified Aerosol Retrieval Algorithm (SARA) over Beijing under low and high aerosol loadings and dust storms, ***Remote Sensing of Environment,*** 153, 50–60, doi: 10.1016/j.rse.2014.07.015.
12. Bilal et al. (2013). A Simplified high resolution MODIS Aerosol Retrieval Algorithm (SARA) for use over mixed surfaces, ***Remote Sensing of Environment,*** 136, 135–145, doi: 10.1016/j.rse.2013.04.014.

Corresponding Author:

1. Zhang et al. (2019). Evaluation of the Aqua-MODIS C6 and C6.1 Aerosol Optical Depth Products in the Yellow River Basin, China. ***Atmosphere*** 2019, *10*, 426.
2. Xie et al. (2019). Mapping daily $PM_{2.5}$ at 500 m resolution over Beijing with improved hazy day performance. ***Science of The Total Environment,*** 659, 410-418.
3. HJ Chu and Bilal (2019). $PM_{2.5}$ mapping using integrated geographically temporally weighted regression (GTWR) and random sample consensus (RANSAC) models. ***Environmental Science and Pollution Research***, 26 (2), 1902-1910.
4. Nazeer and Bilal (2018). Evaluation of Ordinary Least Square (OLS) and Geographically Weighted Regression (GWR) for water quality monitoring: a case study for the estimation of Salinity. ***Journal of Ocean University of China***, 17 (2), 305-310.

Co-Author:

1. Sun et al. (2019). Synoptic relationships to estimate phytoplankton communities specific to sizes and species from satellite observations in coastal waters. ***Optics Express***, 27, A1156-A1172.
2. Rupakheti et al. (2019). Aerosol optical depth climatology over Central Asian countries based on Aqua-MODIS Collection 6.1 data: Aerosol variations and sources. ***Atmospheric Environment,*** 207, 205-214.
3. Tang et al. (2019) Variability of the Suspended Particle Cross-Sectional Area in the Bohai Sea and Yellow Sea. ***Remote Sensing****, 11*, 1187.
4. Karimi et al. (2019). Evaluation and modification of SARA high-resolution AOD retrieval algorithm during high dust loading conditions over bright desert surfaces. ***Atmospheric Pollution Research****, doi: 10.1016/j.apr.2019.01.008*
5. Shen et al. (2019). Long-term spatiotemporal variations of aerosol optical depth over Yellow and Bohai Sea. ***Environmental Science and Pollution Research****, doi: 10.1007/s11356-019-04203-4.*
6. Wei et al. (2018). An improved high-spatial-resolution aerosol retrieval algorithm for MODIS images over land. ***Journal of Geophysical Research: Atmospheres***, doi: 10.1029/2017JD027795

7. Qiu et al. (2018). Automatic method to monitor floating macroalgae blooms based on multilayer perceptron: case study of Yellow Sea using GOCI images, ***Optics Express***, 26 (21), 26810-26829.
8. Qin et al. (2018). Estimating PM1 concentrations from MODIS over Yangtze River Delta of China during 2014–2017, ***Atmospheric Environment***, doi: 10.1016/j.atmosenv.2018.09.054.
9. Qin et al. (2018). Characteristic and Driving Factors of Aerosol Optical Depth over Mainland China during 1980–2017, ***Remote Sensing,*** 10 (7), 1064.
10. Qin et al. (2018). Improving the Estimation of Daily Aerosol Optical Depth and Aerosol Radiative Effect Using an Optimized Artificial Neural Network, ***Remote Sensing*** 10 (7), 1022.
11. Chen et al. (2018). Multilevel Cloud Detection for High-Resolution Remote Sensing Imagery Using Multiple Convolutional Neural Networks. ***ISPRS International Journal of Geo-Information*** 7 (5).
12. Mao et al. (2018) Variations of transparency derived from GOCI in the Bohai Sea and the Yellow Sea. ***Optics Express*** 26 (9), 12191-12209.
13. Ho et al. (2018). Influences of socioeconomic vulnerability and intra-urban air pollution exposure on short-term mortality during extreme dust events. ***Environmental Pollution***, 235, 155-162, doi: 10.1016/j.envpol.2017.12.047.
14. Shen et al. (2018). Validation of MODIS C6 Dark Target Aerosol Products at 3 km and 10 km Spatial Resolutions Over the China Seas and the Eastern Indian Ocean. ***Remote Sensing***, doi: 10.3390/rs10040573.
15. Ho et al. (2018). Spatiotemporal influence of temperature, air quality, and urban environment on cause-specific mortality during hazy days. ***Environment International***, 112, 10-22, doi: 10.1016/j.envint.2017.12.001.
16. Wei et al. (2018). Verification, improvement and application of aerosol optical depths in China part 1: Inter-comparison of NPP-VIIRS and Aqua-MODIS. ***Atmospheric Environment***, doi: 10.1016/j.atmosenv.2017.11.048.
17. He et al. (2018). Performance of the NPP-VIIRS and Aqua-MODIS Aerosol Optical Depth Products over the Yangtze River Basin. ***Remote Sensing***, doi: 10.3390/rs10010117.
18. Zhang et al. (2018). The Characteristics of the Aerosol Optical Depth within the Lowest Aerosol Layer over the Tibetan Plateau from 2007 to 2014, ***Remote Sensing*** 10 (5), 696.
19. Nazeer et al. (2017). Evaluation of Empirical and Machine Learning Algorithms for Estimation of Coastal Water Quality Parameters. ***ISPRS International Journal of Geo-Information,*** 6(11), 360, doi:10.3390/ijgi6110360.
20. He et al. (2017). Aerosol Optical Properties and Associated Direct Radiative Forcing over the Yangtze River Basin during 2001–2015. ***Remote Sensing***, 9 (7), 746.
21. Wei et al. (2017). A simple and universal aerosol retrieval algorithm for Landsat series images over complex surfaces. ***Journal of Geophysical Research: Atmospheres,*** doi: 10.1002/2017JD026922.
22. Wang et al. (2017). Evaporation modeling using different machine learning techniques. ***International Journal of Climatology***, DOI: 10.1002/joc.5064**.**
23. Nichol and Bilal (2016). Validation of MODIS 3 km Resolution Aerosol Optical Depth Retrievals over Asia, ***Remote Sensing****, 8(4), 328, doi: 10.3390/rs8040328****.***
24. Gong et al. (2016). Land Use Regression Models Using Satellite Aerosol Optical Depth Observations and 3D Building Data from the Central Cities of Liaoning Province, China. ***Polish J. Environ. Stud****.*
25. Bin et al. (2016). High–resolution Satellite Mapping of Fine Particulates Based on Geographically Weighted Regression, ***IEEE Geoscience and Remote Sensing Letters****, 13(4), 495–499.* (IF ~ 2.761)
26. Sun et al. (2015). Aerosol Optical Depth Retrieval over Bright Areas using Landsat 8 OLI Images, *Remote Sensing, 8(1), 23.*
27. Butt and Bilal (2011). Application of snowmelt runoff model for water resource management, ***Hydrological Processes****,* 25, 3735–3747**.**