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- **AREA OF SPECIALIZATION AND RESEARCH INTEREST:** FTIR Spectroscopy of Coal/Shale/Minerals/Rocks, Coal Geology, Hyperspectral Remote Sensing and Exploration, Image Processing and Spatial Data Analysis, Aerosols and Climate Change, Geostatistics & GIS
- **PUBLICATIONS:** Refereed Journal Articles (**38**), Proceedings, Newsletters, Reports (**9**), Book Chapters (**2**), PATENTS: (**3**, USA, India).
- **RESEARCH - CITATION INDICES:**
(Google Scholar) **h-index = 27, i10-index = 33, Citations: 3150.**

Total Number of Journal Publications in Entire Career (According to Web of Science - WoS)

No. of Publications in Q1 Journals	No. of Publications in Q2 Journals	Total number of publications
13	15	38

Number of Publications as Sole Guide/Principal Guide of PhD students in current position (According to Web of Science, WoS)

No. of Publications in Q1 Journals	No. of Publications in Q2 Journals
2	6

List of Publications:

Refereed Journal Articles (Web of Science – WoS - Published)

1. Vinod, A., Prasad, A.K., Mishra, S. et al. A novel multi-model estimation of phosphorus in coal and its ash using FTIR spectroscopy. Scientific Reports, 14, 13785 (2024). <https://doi.org/10.1038/s41598-024-63672-x> (Citations: NA, ImpactFactor: 3.8)
2. Nayak, S.; Vinod, A.; **Prasad, A.K.** (2023). Spatial Characteristics and Temporal Trend of Urban Heat Island Effect over Major Cities in India Using Long-Term Space-Based MODIS Land Surface Temperature Observations (2000–2023). Appl. Sci., 13, 13323. <https://doi.org/10.3390/app132413323>. (WoS Citations: NA, ImpactFactor: 2.818)
3. Desinayak, N.; **Prasad, A.K.**; Vinod, A.; Mishra, S.; Shukla, A.; Nayak, S. (2023). Rise in MidTropospheric Temperature Trend (MSU/AMSU 1978–2022) over the Tibet and Eastern Himalayas. Appl. Sci., 13, 9088. <https://doi.org/10.3390/app13169088> (WoS Citations: NA, ImpactFactor: 2.818)
4. Mishra, S.; **Prasad, A.K.**; Shukla, A.; Vinod, A.; Preety, K.; Varma, A.K. (2023). Estimation of Carbon Content in High-Ash Coal Using Mid-Infrared Fourier-Transform Infrared Spectroscopy. Minerals, 13, 938. <https://doi.org/10.3390/min13070938>. (WoS Citations: 1, ImpactFactor: 2.5)

5. Shukla, A., **Prasad, A.K.**, Mishra, S., Vinod, A., & Varma, A.K. (2023). Rapid Estimation of Sulfur Content in High-Ash Indian Coal Using Mid-Infrared FTIR Data. *Minerals*, 13(5), 634. MDPI AG. Retrieved from <http://dx.doi.org/10.3390/min13050634>. (WoS Citations: 1, ImpactFactor: 2.5)
6. Ghosh, S., Philip, G., **Prasad, A. K.**, Syed, T.H., & Mohanty, S.P. (2023). Towards Quantifying the relative tectonic activity in the Trans-Yamuna segment of the NW Himalaya. *Geocarto International*. <https://doi.org/10.1080/10106049.2022.2155712> (WoS Citations: 0, ImpactFactor: 3.45)
7. Mohammad, A., **Prasad, A.K.**, Wetsah, K., Azad, M., Aryan, V., & El-Askary, H. (2022). Titaniferous-Vanadiferous, Magnetite-Ilmenite Mineralization in a Mafic Suite within the Chhotanagpur Gneissic Complex, Bihar, India. *Minerals*, 12(7), 860. <https://doi.org/10.3390/min12070860> (WoS Citations: NA, ImpactFactor: 2.818)
8. Desinayak, N., **Prasad, A.K.**, El-Askary, H., Kafatos, M., & Asrar, G. R. (2022). Snow cover variability and trend over the Hindu Kush Himalayan region using MODIS and SRTM data. *Annales Geophysicae*, 40(1), 67–82. <https://doi.org/10.5194/angeo-40-67-2022> (WoS Citations: 9, ImpactFactor: 2.19)
9. Preety, K., **Prasad, A.K.**, Varma, A. K., & El-Askary, H. (2022). Accuracy Assessment, Comparative Performance, and Enhancement of Public Domain Digital Elevation Models (ASTER 30 m, SRTM 30 m, CARTOSAT 30 m, SRTM 90 m, MERIT 90 m, and TanDEM-X 90 m) Using DGPS. *Remote Sensing*, 14(6), 1334. <https://doi.org/10.3390/rs14061334> (WoS Citations: 8, ImpactFactor: 5.349)
10. El-Askary, H., Park S. K., M-H Ahn, **Prasad, A.K.**, and Kafatos, M. (2015), On the Detection and Monitoring of the Transport of an Asian Dust Storm Using Multi-sensor Satellite Remote Sensing, *Journal of Environmental Informatics*, doi:10.3808/jei.201500306. (WoS Citations: 18, ImpactFactor: 3.773)
11. Park, S., El-Askary, H. , Sabbah, I., Kwak, H., **Prasad, A. K.**, W-K Lee, and Kafatos, M. (2015), Studying air pollutants origin and associated meteorological parameters over Seoul from 2000 to 2009, *Advances in Meteorology*, Article ID 704178, pp. 1-2. <https://doi.org/10.1155/2015/704178>. (WoD Citations: 9, ImpactFactor: 1.348)
12. Kim, So-Ra, **A.K. Prasad**, H. El-Askary, W-K Lee, D-A Kwak, S-Ho Lee, and M Kafatos (2014), Application of the Savitzky-Golay filter to land cover classification using temporal MODIS vegetation indexes, *Photogrammetric Engineering & Remote Sensing*, 80(5), 675-685, <https://doi.org/10.14358/PERS.80.7.675>. (WoS Citations: 25, ImpactFactor: 1.80).
13. Sprigg, W. A. , S. Nickovic, J. N. Galgiani, G. Pejanovic, S. Petkovic, M. Vujadinovic, A. Vukovic, M. Dacic, S. DiBiase, **A. K. Prasad**, and H. El-Askary (2014), Regional dust storm modeling for health services: The case of valley fever, *Aeolian Research*, 14, 53–73. <http://dx.doi.org/10.1016/j.aeolia.2014.03.001>, (WoS Citations: 59, ImpactFactor: 2.520).
14. Vukovic, A., M. Vujadinovic, G. Pejanovic, , J. Andric, M. R. Kumjian, V. Djurdjevic, M. Dacic, , **A. K. Prasad**, H. M. El-Askary, B. C. Paris, S. Petkovic, S. Nickovic, and W. A. Sprigg (2014), Numerical simulation of "An American Haboob", *Atmos. Chem. Phys.*, 14, 3211– 3230, 2014, www.atmos-chem-phys.net/14/3211/2014/; doi:10.5194/acp-14-3211-2014, (WoS Citations: 44, ImpactFactor: 5.510).
15. Jaswal, A. K., N. Kumar, **A. K. Prasad**, and M. Kafatos (2013), Decline in horizontal surface visibility over India (1961-2008) and its association with meteorological variables (2013), *Natural Hazards*, 1-26pp., <https://doi.org/10.1007/s11069-013-0666-2>. (WoS Citations: 20, ImpactFactor: 1.639).

16. Kumar, S., Singh A.K., **A.K. Prasad**, and R.P. Singh (2013), Variability of GPS derived water vapor and comparison with MODIS data over the Indo-Gangetic plains, *Physics and Chemistry of the Earth*, 55-57, 11-18, (doi:10.1016/j.pce.2010.03.040. (WoS Citations: 23, ImpactFactor: 0. 917).
17. Kaskaoutis, D. G., **A.K. Prasad**, P.G. Kosmopoulos, P.R. Sinha, S. K. Kharol, P. Gupta, H. M. El-Askary, and M. Kafatos (2012), Synergistic use of remote sensing and modeling for tracing dust storms in the Mediterranean, *Advances in Meteorology*, , 14pp, doi:10.1155/2012/861026, (WoS Citations: 22, ImpactFactor: 1.239).
18. El-Askary, H., Mohamed Allali, C. Rakovski, **A.K. Prasad**, Menas Kafatos, and Daniele Struppa (2012), Computational methods for climate data, *Wiley Interdisciplinary Reviews: Computational Statistics*, 4 (4), pages 359–374, DOI: 10.1002/wics.1213, (WoS Citations: 3 , ImpactFactor: NA).
19. **Prasad, A.K.**, R. P. Singh, and M. Kafatos (2011), Influence of coal-based thermal power plants on the spatial–temporal variability of tropospheric NO₂ column over India, *Environmental Monitoring and Assessment*, DOI 10.1007/s10661-011-2087-6. (WoS Citations: 41, ImpactFactor: 1.436).
20. **Prasad, A. K.**, H.M. El-Askary, and M. Kafatos (2010), Implications of high altitude desert dust transport from Western Sahara to Nile Delta during biomass burning season, *Environmental Pollution*, 158, 3385-3391. <https://doi.org/10.1016/j.envpol.2010.07.035>. (WoS Citations: 34, ImpactFactor: 3.395).
21. **Prasad, A.K.**, R.P. Singh (2010), Chlorophyll, calcite, and suspended sediment concentrations in the Bay of Bengal and the Arabian Sea at the river mouths, *Advances in Space Research*, 45, 61– 69. <https://doi.org/10.1016/j.asr.2009.07.027>. (WoS Citations: 17, ImpactFactor: 1.076).
22. **Prasad, A.K.**, and R. P. Singh (2009), Validation of MODIS Terra, AIRS, NCEP/DOE AMIP-II Reanalysis-2, and AERONET Sun photometer derived integrated precipitable water vapor using ground-based GPS receivers over India, *Journal of Geophysical Research*, 114, D05107, doi:10.1029/2008JD011230. (WoS Citations: 121, ImpactFactor: 3.303).
23. **Prasad, A.K.**, K.-H.S. Yang, H.M. El-Askary, and M. Kafatos (2009), Melting of major Glaciers in the western Himalayas: evidence of climatic changes from long term MSU derived tropospheric temperature trend (1979-2008), *Ann. Geophys.*, 27, 4505-4519. doi:10.5194/angeo27-4505-2009. (WoS Citations: 85, ImpactFactor: 1.620).
24. Singh, R. P., **A.K. Prasad**, V.K. Kayetha, and M. Kafatos (2008), Enhancement of oceanic parameters associated with dust storms using satellite data, *Journal of Geophysical Research*, 113, C11008, doi:10.1029/2008JC004815. (WoS Citations: 72, ImpactFactor: 3.303).
25. **Prasad, A.K.**, S. Singh, S.S. Chauhan, M.K. Srivastava, R.P. Singh, and R. Singh (2007), Aerosol radiative forcing over the Indo-Gangetic plains during major dust storms, *Atmospheric Environment*, doi:10.1016/j.atmosenv.2007.03.060. (WoS Citations: 147, ImpactFactor: 3.226).
26. **Prasad, A.K.**, and R.P. Singh (2007), Changes in aerosol parameters during major dust storm events (2001-2005) over the Indo-Gangetic basin using AERONET and MODIS data, *Journal of Geophysical Research*, 112 (D9), D09208, doi: 10.1029/2006JD007778. (WoS Citations: 182, ImpactFactor: 3.303).
27. Bhattacharjee, P.S., **A.K. Prasad**, M. Kafatos, and R.P. Singh (2007), Influence of A Dust Storm on Carbon Monoxide and Water Vapor over Indo-Gangetic Plains, *Journal of Geophysical*

- Research, 112, D18203, doi:10.1029/2007JD008469. (WoS Citations: 39, ImpactFactor: 3.303).
28. **Prasad, A.K.**, S. Sarkar, and R.P. Singh (2007), Inter-annual variability of vegetation cover and rainfall over India, *Advances in Space Research*, 39, 79–87, doi:10.1016/j.asr.2006.02.026. (WoS Citations: 32, ImpactFactor: 1.076).
 29. **Prasad, A.K.** and R.P. Singh (2007), Features of hurricane Katrina using multi sensor data, *International Journal of Remote Sensing*, 28 (21), 4709-4713. DOI: 10.1080/01431160500522668. (WoS Citations: 2, ImpactFactor: 1.188).
 30. **Prasad, A.K.** and R.P. Singh (2007), Comparison of MISR-MODIS aerosol optical depth over the Indo-Gangetic basin during the winter and summer seasons (2000-2005), *Remote Sensing of Environment*, 107, 109-119, doi:10.1016/j.rse.2006.09.026. (WoS Citations: 163, ImpactFactor: 3.954).
 31. Kayetha, V.K., Senthilkumar J., **A.K. Prasad**, G. Cervone and R.P. Singh (2007), Effect of dust storm on ocean color and snow parameters, *Photonirvachak - Journal of the Indian Society of Remote Sensing*, 35(1). <https://doi.org/10.1007/BF02991828>. (WoS Citations: 26, ImpactFactor: 0.29).
 32. Singh, R.P., G. Cervone, M. Kafatos, **A.K. Prasad**, A.K. Sahoo, D. Sun, D.L. Tang and R. Yang (2007), Multi-sensor Studies of the Sumatra Earthquake and Tsunami of 26 December 2004, *International Journal of Remote Sensing*, 28 (13-14), 2885-2896 (12), doi: 10.1080/01431160701237405. (WoS Citations: 43, ImpactFactor: 1.188).
 33. **Prasad, A.K.**, R.P. Singh, V. Tare and M. Kafatos (2006), Use of vegetation index and meteorological parameters for prediction of crop yield in India, *International J. Remote Sensing*, 28 (23), 5207 – 5235, doi: 10.1080/01431160601105843. (WoS Citations: 50, ImpactFactor: 1.188).
 34. **Prasad, A.K.**, R.P. Singh and M. Kafatos (2006), Influence of coal based thermal power plants on aerosol optical properties in the Indo-Gangetic basin, *Geophysical Research Letters*, 33, L05805, doi:10.1029/2005GL023801. (WoS Citations: 117, ImpactFactor: 3.505).
 35. **Prasad, A.K.**, R.P. Singh and A. Singh (2006), Seasonal climatology of aerosol optical depth over Indian subcontinent: trend and departures in recent years, *International Journal of Remote Sensing*, 27(12), 2323–2329, doi: 10.1080/01431160500043665. (WoS Citations: 46, ImpactFactor: 1.188).
 36. **Prasad, A.K.**, K. Vinay Kumar, S. Singh and R.P. Singh (2006), Potentiality of multi-sensor satellite data in mapping flood hazard, *Photonirvachak-Journal of the Indian Society of Remote Sensing*, 34 (3): 219-231. <https://doi.org/10.1007/BF02990651>. (WoS Citations: 12, ImpactFactor: 0.29).
 37. **Prasad, A.K.**, L. Chai, R.P. Singh and M. Kafatos (2005), Crop yield estimation model for Iowa using remote sensing and surface parameters, *International Journal of Applied Earth Observation and Geoinformation*, 8 (1), 26-33, doi:10.1016/j.jag.2005.06.002. (WoS Citations: 265, ImpactFactor: 1.744).
 38. **Prasad, A.K.** and R.P. Singh (2005), Extreme rainfall event of July 25-27, 2005 over Mumbai, west coast, India, *Photonirvachak-Journal of the Indian Society of Remote Sensing*, 33 (3), 365370. <https://doi.org/10.1007/BF02990007>. (WoS Citations: 18, ImpactFactor: 0.29).

Proceedings and Newsletters

1. Kafatos, M., **A. K. Prasad**, H. M. El-Askary and D. G. Kaskaoutis (2012), Correlation, vertical distribution and column integrated characteristics of aerosols during winter-time dust storms over the Mediterranean region, 26th International Laser Radar Conference (ILRC 26).
2. **Prasad, A.K.**, R.P. Singh, S. Singh and D.S. Nanda (2007), GPS and Satellite Meteorology for Understanding monsoon dynamics over the Indian sub-continent, *IAHS Red Book Series*, 313, 3339. Citations: 5.
3. **Prasad, A.K.** and R.P. Singh (2006), Population Dynamics and Increasing Pollution: Its Impact on the Climatic Conditions Over the Indo-Gangetic Basin, *Proceedings of the 6th International Symposium on Advanced Environmental Monitoring*, June 27-30, 2006, Heidelberg, Germany.
4. Chaturvedi, P., **A.K. Prasad** and Singh, R.P. (2006), Comparison of chlorophyll concentration in the Bay of Bengal and the Arabian Sea using IRS-P4 Ocean Color Monitor, and MODIS Aqua, Proceedings ISRS 2006 PORSEC, at Bexco, Busan, Korea, November 2-4.
5. **Prasad, A.K.**, R.P. Singh, A. Singh, and M. Kafatos (2005), Seasonal Variability of Aerosol Optical Depth over Indian Subcontinent, *Analysis of Multi-Temporal Remote Sensing Images, 2005 International Workshop, IEEE*, pp.35- 38. Citations: 6.
6. **Prasad, A.K.** and R.P. Singh (2005), Seasonal, Inter-Annual Variability of Aerosol Optical Depth over the Indo-Gangetic basin and circulation pattern of wind, in *Proceedings of the 4th Asian Aerosol Conference, IASTA Bulletin*, vol. 17 (1 & 2).
7. **Prasad, A.K.**, R.P. Singh, M. Kafatos and A. Singh (2005), Effect of the growing population on the air pollution, climatic variability and hydrological regime of the Ganga basin, India. In: Regional Hydrological Impacts of Climatic Change-Impact Assessment and Decision Making (ed. by T. Wagener, S. Franks, H. V. Gupta, E. Boegh, L. Bastidas, C. Nobre & C. D. O. Galvao), IAHS Press, Wallingford, UK., IAHS Publ. 295., 139-146.
8. Singh, R.P., **A.K. Prasad**, S.S. Chauhan, S. Singh (2005), Country Report: Impact of growing urbanization and air pollution on the regional climate over India, *IAUC Newsletter, International Association for Urban Climate*, Issue No. 14, Dec. 2005 (<http://www.urbanclimate.org/IAUC014.pdf>).

Book Chapters

1. **Prasad A.K.**, H. El-Askary, G.R. Asrar, M. Kafatos and A. Jaswal (2011), “**Melting of Major Glaciers in Himalayas: role of desert dust and anthropogenic aerosols**” In: Planet Earth 2011 - Global Warming Challenges and Opportunities for Policy and Practice, InTECH open access publisher. ISBN 978-953-307-733-8. Available from: <http://www.intechopen.com/articles/show/title/melting-of-major-glaciers-in-himalayas-role-of-desert-dust-and-anthropogenic-aerosols>. Citations: 2.
2. El-Askary H., **Prasad A.K.**, Kallos G., El-Raey M., and Kafatos M. (2011), Analyzing Black Cloud Dynamics over Cairo, Nile Delta Region and Alexandria using Aerosols and Water Vapor Data In: Air Quality - Models and Applications, InTECH open access publisher ISBN 978-953307-307-1. Citations: 1 **Reports:**

Technical reports:

1. W.A. Sprigg, J.N. Galgiani, S. Nickovic, G. Pejanovic, M. Vujadinovic, A. Vukovic, **A. Prasad**,

S. Petkovic, H. El-Askary, R. Gaddi, Z. Janjic, D. Pappagianis, N. Sarafoglou, M. Kafatos, M. Bruck and M.-J. Ferng: Airborne Dust Models: A Tool in Environmental Health Tracking; final report, Centers for Disease Control and Prevention - CDC, Atlanta, GA, 180 pp., 2012.

Patents:

1. US Patent number: US7702597 (Granted). Title “Crop Yield Prediction Crop yield prediction using piecewise linear regression with a break point and weather and, agricultural parameters”. R. P. Singh, Anup K Prasad, Vinod Tare and Menas Kafatos. Date of Issue: Apr 20, 2010. Citations: 36
2. Indian Patent Application: Title: “Multi-model method and system of estimation of ash yield in coal using mid-infrared Fourier transform infrared spectroscopy”, No. 202431065336, Published 06.09.2024. In the name of Indian Institute of Technology (Indian School of Mines), Dhanbad. Inventors: Anup Krishna Prasad, Sameeksha Mishra, Arya Vinod, Anubhav Shukla, Shailayee Mukherjee, Bitan Purkait, Atul Kumar Varma, Bhabesh Chandra Sarkar.
3. Indian Patent Application: Title: “A method of multi-model estimation of carbon in coal using mid-infrared Fourier transform infrared spectroscopy”, No. 202431076911, Published 18/10/2024. In the name of Indian Institute of Technology (Indian School of Mines), Dhanbad. Inventors: Anup Krishna Prasad, Sameeksha Mishra, Arya Vinod, Anubhav Shukla, Bitan Purkait, Shailayee Mukherjee, Atul Kumar Varma, Bhabesh Chandra Sarkar.

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