SAURABH VERMA

MSc., Atmospheric Sciences

CONTACT

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LANGUAGES:

- English: Academic
- Hindi: Native

ACHIEVEMENTS:

- Qualified IIT–JAM in 2017.
- Received INSPIRE fellowship.
- Received best paper award at the 21st National Space Science Symposium (NSSS) on climate change.

EDUCATION

- **Indian Institute of Technology Bombay, Maharashtra, India**
  PhD in Geoinformatics and Natural Resources Engineering
  (Jan 2022 – Present)
- **National Institute of Technology Rourkela, Odisha, India**
  MSc in Atmospheric Sciences
  (July 2017 – May 2019)
- **University of Delhi, New Delhi, India**
  BSc (Hons.) in Physics
  (July 2013 – May 2016)
- **S M L K S D Inter College, Uttar-Pradesh, India**
  Higher Secondary in Mathematics
  (July 2012 – May 2013)

WORK EXPERIENCE

- **Junior Research Fellow (Sep 2021 – Dec 2022) –** Indian Institute of Remote Sensing, ISRO, Dehradun
- **GIS Analyst (Dec 2019 – Sep 2020) –** Oddaka Infratech Pvt. Ltd.
- **Project Assistant (May 2019 – Oct 2019) –** National Institute of Technology Rourkela

RESEARCH EXPERIENCE

- **Summer Intern (May 2018 – Jun 2018) –** Academia Sinica, Taiwan
- **MSc (Thesis) -** titled "Numerical modelling of atmospheric boundary layer characteristics over Mumbai during heavy rainfall scenarios using WRF".

PUBLICATIONS

1. Verma, S., Panda, J. & Rath, S.S. Role of PBL and Microphysical Parameterizations During WRF Simulated Monsoonal Heavy Rainfall Episodes Over Mumbai. *Pure Appl. Geophys. (2021).* https://doi.org/10.1007/s00024-021-02813-z

2. Verma, S., & Singh, C. (2022). High-Resolution Solar Energy Parameters under the Climate Change Scenario for Jammu and Kashmir and Ladakh Region. *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences, 43, 183-188.* https://doi.org/10.5194/isprs-archives-XLIII-B4-2022-183-2022

3. Verma, S., Kumar, S., Kant, S. et al. Sensitivity analysis of convective and PBL parameterization schemes for Luban and Titli tropical cyclones. *Theor Appl Climatol 151, 311–327 (2023).* https://doi.org/10.1007/s00704-022-04264-5

NATIONAL AND INTERNATIONAL CONFERENCES/ WORKSHOPS

- Sudhanshu S. Rath, Saurabh Verma, Jagabandhu Panda '*Sensitivity to boundary layer and microphysics parameterizations over two urban complexes during extreme weather events*', IITD-ANCST International Workshop on Modeling Atmospheric - Oceanic Processes for Weather and Climate Extremes (MAPEX 2019), March 28-29 2019, IIT Delhi.
- Saurabh Verma and Charu Singh, "*Impact of Climate Change on Meteorological Parameters over Mountainous Region*." The 21st National Space Science Symposium (NSSS) on climate change, atmospheric coupling, oceanography, and space-based meteorology, organised by Indian Institutes of Science Education and Research (IISER), Kolkata, India, 1st Jan - 4th Feb 2022.
- Saurabh Verma and Charu Singh, "*High-Resolution Solar Energy Parameters under the Climate Change Scenario for Ladakh Region*", The 24th International Society for Photogrammetry and Remote Sensing (ISPRS) congress on photogrammetry, remote sensing, and geospatial information, Nice (France), June 6 –11th, 2022.
- Saurabh Verma and Charu Singh, "*Estimation of Solar Energy Potentials in Western Himalayan Region*", The National Seminar on Recent Trends in Geospatial Technology for Environment & Health, jointly organised by the Indian Institute of Remote Sensing (IIRS), ISRO and Indian Society of Remote Sensing (ISRS), March 24th, 2022.
- Saurabh Verma and Charu Singh, "*Investigation of Atmospheric and Renewable Energy Parameters over High Mountainous Region*", The 2nd Online International Conference on Atmospheric and Earth Sciences, Atmospheric and Earth Sciences Current Research and Explorations, April 4–5th, 2022.
- Saurabh Verma, "*Role of PBL and microphysical parameterizations during WRF simulated monsoonal heavy rainfall episodes over Mumbai*", Seventh WMO International Workshop on Monsoons (IWM-7), organized by Indian Meteorological Department (IMD), Ministry of Earth Science, New Delhi, India, March 22–26th, 2022.
- Saurabh Verma and Karthikeyan Lanka, "*A Statistical Approach for Soil Moisture Drought Prediction at Sub-Seasonal Scale Over Indian Subcontinent*", AGU fall meeting 2023, held in San Francisco, CA, 11-15 December 2023.

SKILLS

- Experience in writing, reviewing, and editing research articles.
- Experience to work with both Linux and Windows operating systems.
- Experience in Microsoft Office.
- Command in programming languages (e.g., MATLAB, Python, and Shell scripting) and data handling/visualization tools, e.g., GrADS, CDO, NCO, NCL, Wind Rose and QGIS.
- Experience handling large data sets in different formats (e.g., NetCDF, GRIB, HDF, and ASCII).
- Experience in handling WRF-ARW, WRF-Solar, and WRF-Chem numerical weather models.
- Experience in machine learning and deep learning.