BIODATA

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Projects:

SN	Title of the Project	Funding Agency	Sanctioned Amount	PI/Co-PI	Ongoing/Completed
1	Assessment of land surface parameters role for weather pattern in western Himalaya region.	DST-SERB	~ 40 Lakhs	PI	Completed in 2021
2	Glacio-hydrometeorology and paleo-history of Brahma group of glaciers, Chenab Basin, J&K	DST-HICAB	~~62 Lakhs	Co-PI	Completed in 2022
3	Geo-spatial modelling and analysis of vehicular emissions and health impacts: A case study of Jammu	DST-SERB	45 Lakhs	PI	Ongoing

Publication:

- P. Pandey, **D. Kumar**, A. Prakash, *K. Kumar, and V.K. Jain, 2009. *A study of the summertime urban heat island over Delhi*, International Journal of Sustainability Science and Studies, Volume 1, Number 1, ISSN 2036-7929, 27-34.

- Puneeta Pandey, **Dinesh Kumar**, Amit Prakash, Jamson Masih, Manoj Singh, Surendra Kumar, Vinod Kumar Jain, Krishan Kumar*, 2011. *A study of urban heat island and its association with particulate matter during winter months over Delhi*, Science of the Total Environment, Vol-414, 494–507.

- Pandey AK, Singh S, BerwalShivesh, **Kumar Dinesh**, Pandey Puneeta, Prakash A, Lodhi N, Maithani Sandeep, Jain VK, Kumar Krishan, 2014. "Spatio – temporal variations of urban heat island over Delhi", Urban Climate, Vol-10, P-1,119-133, Elsevier

- Islam Tanvir, Srivastava K Prasant, **Kumar Dinesh**, Petropoulos P. George, Dai Qiang, Zhuo Lu, 2016. "Satellite radiance assimilation using 3DVAR assimilation system for hurricane Sandy forecasts". Natural Hazards, Vol-82, Issue 2, pp 845–855, Springer.

- Shivesh Berwal , **Dinesh Kumar** , Alok Kumar Pandey, Vinay Pratap Singh, Ritesh Kumar, Krishan Kumar, 2016: Dynamics of Thermal Inertia over Highly Urban City: a case study of Delhi. Remote Sensing Technologies and Applications in Urban Environments, Proc. of SPIE Vol. 10008, 100080E, © 2016 SPIE Doi:0.1117/12.2241741.

- **Dinesh kumar**, U C Mohanty, Krishan Kumar, (2017), Parametrization schemes for thunderstorm prediction over Indian region. Accepted for publication in International Journal of the Indian society of remote sensing and Annals of GIS (Springer).

- **Kumar, D**., Mohanty, U. C., and Kumar, K.: Sensitivity of land surface and Cumulus schemes for Thunderstorm prediction, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLI-B8, 271-275, https://doi.org/10.5194/isprs-archives-XLI-B8-271-2016, 2016.

- Zahid Nabi and **Dinesh Kumar***, 2022. Sensitivity of WRF Model for Simulation of 2014 Massive Flood Over Kashmir Region: A Case of Very Heavy Precipitation, Nature

Environment and Pollution Technology An International Quarterly Scientific Journal; Vol-21/5:2177-2187.

- Neha Verma, Shivali Kundan, Zahid Nabi, **Dinesh Kumar***, 2022. Soil moisture and soil temperature assimilation using HRLDAS for heavy rainfall event forecasting over the Indian region, Bulletin of Environment, Pharmacology, and life sciences: A monthly peer-reviewed international journal of life sciences; Vol 11 [11]:204-214

- Shivali Kundan, Neha Verma, Zahid Nabi, **Dinesh Kumar***, 2022. Satellite radiance assimilation using the 3D-var technique for the heavy rainfall over the Indian region, The Scientific Temper: Interdisciplinary Research Journal; Vol. 13 (2): 425-431.

- Bhupendra Pratap Singh, Manoj Singh, Yashmita Ulman, Urvashi Sharma, Rashmi, Pradhan, Jagruti Sahoo, Sibani Padhi, Prakash Chandra, Monika Koul, Prem, Narayan Tripathi, **Dinesh Kumar**, Jamson Masih, 2023. Distribution and temporal variation of total volatile organic compounds concentrations associated with health risk in Punjab, India, Case Studies in Chemical and Environmental Engineering, Elsevier; Vol-8:1-10.

- Shashi Kant Rai, Prof. Sunil Dhar, Gagandeep Kour, Rakesh Sahu, Arun Kumar, Deepak Pathania, Pankaj Mehta, and **Dinesh Kumar** 2023. Multi parametrical analysis of Haptal Glacier, Lower Chenab basin, Jammu and Kashmir, India; A remote sensing approach. Journal of Earth System Science (Accepted).

- Bhupendra Pratap Singh, Pretti Sai, Sakshi Rautela, Harison Masih, **Dinesh Kumar**, Sudhir Kumar Singh, Jamson Masih, 2023. Urban water quality and Covid -19 during the lockdown periods: A case study of Ghaggar River, Punjab, India, Urban Water Journal (Accepted).

Books, Chapters and E-contents:

- Zahid Nabi, Shivali Kundan, Neha Verma and Dinesh Kumar*, 2023. Cannabis sativa and Its Ability to Combat Climate Change: Unravelling Sustainable Benefits of Cannabis and Its Derivatives, IGI Global Publisher, ISSN: 9781668457184.

- Neha Verma, Shivali Kundan, Zahid Nabi, Dinesh Kumar, 2023. Tropical Cyclone: its effects and prediction, PK Publisher &Distributors; ISSN: 978-93-92239-58-8.

- Shivali Kundan, Dinesh Kumar, Zahid Nabi, Neha Verma, 2023. Climate Change and Extreme Weather Events Over the Indian Subcontinent PK Publisher &Distributors; ISSN: 978-93-92239-58-8.

- Zahid Nabi, Shivali Kundan, Neha Verma and **Dinesh Kumar**, 2023. Tools and Techniques Used in the Modeling of Hydrometeorological Events: Understanding the scientific process of predicting such events , IGI Global Publisher, ISSN: 1668487713

- Zahid Nabi, Shivali Kundan, Neha Verma and **Dinesh Kumar**, 2023. The 2013 North Indian Floods A Case Study: A Tale of Devastation and Resilience, , IGI Global Publisher, ISSN: 9781668487716

- Dinesh Kumar, 2018. Hierarchical network and relational data, UGC-E-Pathsala; Paper-No-6-Module-22, MHRD-NME; https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=0Xvq9yUM2ILDrJ07FvlArQ==.

- Dinesh Kumar, 2018. Geo-relational and Object Oriented Data Structure, UGC-E-Pathsala; Paper-No-6-Module-23, MHRD-NME; https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=0Xvq9yUM2ILDrJ07FvlArQ==.

- Dinesh Kumar, 2018. Map Algebra, UGC-E-Pathsala; Paper-No-6-Module-26, MHRD-NME; https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=0Xvq9yUM2ILDrJ07FvlArQ==.

- Dinesh Kumar, 2018. Spatial Analyst- Network Analyst, UGC-E-Pathsala; Paper-No-6-Module-27, MHRD-NME; https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=0Xvq9yUM2ILDrJ07FvlArQ==.

- Dinesh Kumar, 2018. Application of Remote Sensing for Vegetation Mapping, UGC-E-Pathsala; Paper-No-6-Module-35, MHRD-NME; https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=0Xvq9yUM2ILDrJ07FvlArQ==

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PhD Guidance:

- The following students are registered as per details:

S No	Name of The Scholar	Title of Scholar	Year of Admission
1	Zahid Nabi	Role of land surface parameters in accessing the evolution of atmospheric processes in North-western Himalaya and adjoining areas	2016 (Submitted)
2	Shivali Kundan	Analysis of land surface and lower atmospheric interactions over the Indian region	2019
3	Neha Varma	Impact of land surface data assimilation on weather prediction at different scales over north-western Himalayan region	2021

Conference Organised:

- Associated as organizing secretory in National workshop on 'A***ir pollution and health impacts (need of interdisciplinary Research)'*** on June 01, 2022, organized by Department of Environmental Sciences, Central University of Jammu.

- Conducted a National Workshop on "***Popularisation of Remote Sensing based Maps and Geospatial Information***" online on 11 Aug 2017 organized by IIRS Dehradun.

- Associated as organizing secretary in International Workshop on ***"Role of Aerosols in Ice Nucleation: A Climate Perspective"*** on 25th Nov 2019 organized by the Department of Environmental Sciences, Central University of Jammu.

- Associated as organizing secretory in National conference on ***'Climate change, Societal consequences and Mitigation: Future Vision (NCCCSCM-2018)'*** on 26-27 April, 2018 organized by the Department of Environmental Sciences, Central University of Jammu.

- Invited speaker in International Conference on '***Climate Change, Sustainable Development & Smart Agriculture (ICSSA-2023)***' 6TH – 7TH April 2023 (Online) organized by Kalinga University, Naya Raipur, India.

- Chaired session in Winter School-2023 Hands-on Training on '***Instrumentation and Analytical Techniques for Atmospheric Aerosols measurements and source apportionment studies'***, 20-25 Feb, 2023 organized by Department of Environmental Sciences, Central University of Jammu.

Workshop, Conference, and full proceedings:

- Shivesh Berwal, Dinesh Kumar, Alok Kumar Pandey, Vinay Pratap Singh, Ritesh Kumar, Krishan Kumar, 2016: Dynamics of Thermal Inertia over Highly Urban City: a case study of Delhi. Remote Sensing Technologies and Applications in Urban Environments, Proc. of SPIE Vol. 10008, 100080E, © 2016 SPIE Doi:0.1117/12.2241741.

- Dinesh Kumar, U C Mohanty, Krishan Kumar, (2017), Parametrization schemes for thunderstorm prediction over Indian region. Accepted for publication in the International Journal of the Indian Society of Remote Sensing and Annals of GIS (Springer).

- Kumar, D., Mohanty, U. C., and Kumar, K.: Sensitivity of land surface and Cumulus schemes for Thunderstorm prediction, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLI-B8, 271-275, https://doi.org/10.5194/isprs-archives-XLI-B8-271-2016, 2016.

- Kumar Dinesh*, Mohanty UC, Kumar Krishan (2015), Sensitivity of PBL and Cumulus schemes for Thunderstorm prediction over an Indian Region, accepted for Poster for EGU General Assembly, Vienna, Austria, 12 – 17 April 2015, in Session NP1.3/HS2.3.16, Geophysical Research Abstracts, Vol. 17, EGU2015-109, 2015.

- Kumar Dinesh (2014). Satellite radiance assimilation using 3D-Var: A case study of thunderstorm over Indian region (Accepted for Oral), 40th COSPAR Scientific Assembly, 2-10 August 2014 at Moscow, Russia, Organized by Committee on Space Research

- Zahid Nabi, Shivali Kundan, Dinesh Kumar, and UC Mohanty (2021). Impact of microphysics on convective events: a case study of heavy rainfall, INTROMET-23-26, Nov 2021, Online Mode.

- Shivali Kundan, Zahid Nabi, Dinesh Kumar (2021). Variability of Atmospheric boundary layer height over Indian Subcontinent: A review analysis; INTROMET-23-26, Nov 2021, Online Mode.

- Dinesh Kumar, Zahid Nabi, UC Mohanty (2021). Role of cloud micro-physics towards convective events A case study of heavy rainfall; ICCP, 2-6, Aug, 2021, Online Mode.

- Delivered a talk on "***Geospatial Technology for Monitoring of Environmental Hazards and Disaster Management***" in ***DST-SERB sponsored the Karyashala workshop*** from March 01-07, 2023 at the Central University of Punjab, Bathinda.

Academic Qualification:

Course Name	University/College	Year of Award	Title	
M.Phil. (Pre-Ph.D.)	Jawaharlal Nehru University, New Delhi, INDIA	July 2008		6.4 (CGPA)
PhD	Jawaharlal Nehru University, New Delhi, INDIA	April-2014	Thunderstorm Simulation with Enhanced Land Surface Representation Over North-Eastern Indian Coastal Region	**Supervisor:** Prof Krishan Kumar**, Co-Supervisor:** Prof U C Mohanty (IIT-Delhi)

Academic achievements:

- In 2006 Qualified as Junior Research Fellowship of ICMR in Environmental Sciences.
- June 2007: Qualified as Junior Research Fellow of CSIR (Premier industrial R&D organisation in India) in subject of Earth Sciences.
- June 2007 Qualified National Eligibility Test (NET) conducted by UGC in the subject of Environmental Sciences.
- Qualified GATE in 2007.
- Qualified for DS Kothari Post- doctoral Fellowship (2013).

Software Skill:

- Handling of WRF model and its different modules like MET, WRFDA, WRF, WPS, WRF-Utilities, WRF-Post processing.
- Compatible with Linux environment, including shell-script.
- Working hand on C++ and have one month certificate course provided by NIIT.
- Expertise on Image processing software i.e. ENVI and ERDAS IMAGINE.

- Complete handling of GIS software i.e. ARCGIS.