Vimal Chandra Sharma

Personal Details

Email: vcsharma.iith@gmail.com
Phone (mobile): +91-95333-26967
Private address: House No. G1, Lakshmi residency, Bandlaguda Jagir, Hyderabad, Telangana, India
Date of birth: 15 February 1991
Nationality: Indian

Main research Interests

- Hydrological Modelling and Flood Forecasting
- Geoinformatics and Machine Learning

Education

09/2021 Ph.D. in Environmental and Water Resources Engineering, Indian Institute of Technology Hyderabad, Sangareddy, India
Dissertation: *Ensemble Streamflow and Flood Inundation Estimation using Physically Based Models in the Lower Godavari River Basin, India*

06/2014 Masters of Technology in Geoinformatics and Remote Sensing, Amity University, Noida, India
Dissertation: *Geoinformatics approach for flood-prone area assessment in the Godavari basin, Telangana state, India*

06/2012 Bachelor of Technology in Digital Techniques for Design and Planning, Department of Digital Technology, Jawaharlal Nehru Architecture and Fine Arts University, Hyderabad, India
Thesis: *Computing Tsunami arrival times along the east coast of India using different GIS techniques for a source in the Andaman region*

List of publications

1. Sharma, V.C.; Regonda, S.K. Multi-Spatial Resolution Rainfall-Runoff Modelling—A Case Study of Sabari River Basin, India. Water 2021, 13, 1224. https://doi.org/10.3390/w13091224
2. Sharma, V.C.; Regonda, S.K. Two-Dimensional Flood Inundation Modeling in the Godavari River Basin., India—Insights on Model Output Uncertainty. Water 2021, 13(2),191. https://doi.org/10.3390/w13020191
3. Patnaik, S., Sharma, V. C., Biswal, B. 2019. Evaluation of an instantaneous dryness index-based calibration-free continuous hydrological model in India. Hydrology Research, 50(3), 915-924. https://doi.org/10.2166/nh.2019.081
4. Dhote, P. R., Thakur, P. K., Aggarwal, S. P., Sharma, V. C., Garg, V., Nikam, B. R., & Chouksey, A. (2018). Experimental flood early warning system in parts of Beas Basin using integration of weather forecasting, hydrological

and hydrodynamic models. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 42, https://doi.org/10.5194/isprs-archives-XLII-5-221-2018.

List of conferences

1. Sharma, V. C., & Regonda, S. (2021). Rainfall-runoff modeling at different spatial scales: Application of semi-distributed hydrological modeling in the Godavari River Basin, India. Earth and Space Science Open Archive ESSOAr. https://doi.org/10.1002/essoar.10506062.1
2. Sharma, V.C., Regonda, S.K., Rao, Y.V., Reddy, Y.K., Nagaratna, K. Comparison between radar-, rain gauge and satellite-based rainfall for Hyderabad region, India. IRAD 2019 conference, January 10 to 12, 2019. Pune, India. (Presented)
3. Swagat, P., Sharma, V.C., & Biswal, B., 2018. 'Is there a Universal Calibration-Free Continuous Hydrological Model? Evaluation of an Instantaneous Dryness-Index Based Model, Testing a Dynamic Budyko in Godavari and Krishna River Basins. SWAT conference, IIT madras.
4. Swagat, P., Sharma, V.C., and Biswal, B., 2017. 'An Instantaneous Dryness-index Based Universal Dynamic Zero-parameter Budyko Model for Prediction in Ungauged Basins'. AOGS conference, Singapore. (Poster)
5. Biswal, B., Swagat, P. and Sharma, V.C., 2017. Is there a 'Universal' Dynamic Zero-Parameter Hydrological Model? Evaluation of a Dynamic Budyko Model in the US and India. AGU Fall Meeting, New Orleans, Louisiana. (Poster)
6. Biswal, B., Otta, k., Patnaik, S., Sharma, D. and Sharma, V.C., 2017. 'A Dynamic Zero-Parameter Budyko Model for Daily River Flow Prediction in Ungauged Regions: Testing the Model in Amazon Basin'. Gordon Conference, Lewiston. (Poster)
7. Aggarwal, S., Sharma, V.C., Thakur, P, K., and Aggarwal, S, P., 2015. 'Hydrological Modeling in Hilly Watershed with Free and Open Source Software (FOSS)', Open Source Geospatial Foundation (OSGEO), FOSS4G. (Conference proceedings)

Working Experience

02/2022 - 04/2022	Project coordinator of 'Collaborative Indo- German PRoject on Estimating and Predicting Natural Hazards in the Himalayan Region (Co-PREPARE)' , department of hydrology, IIT Roorkee, India
10/2021 – 11/2021	Assistant professor, department of digital technology, Jawaharlal Nehru Architecture and Fine Arts University, Hyderabad, India. Subjects taught: DGPS, Management science, GIS, additional responsibilities: mini project coordinator
02/2015-12/2015	Junior Research Fellow, Indian Institute of Remote Sensing (IIRS) –

	ISRO, 4, Kalidas road, Dehradun, 248001, Uttarakhand, India Research project: Remote Sensing, Ground observation and Integrated Modelling based Early Warning System (EWS) for Climate Extremes of North Himalayan region, sponsored by Disaster Management Support Division (DMSD), ISRO Work tasks: GFS rainfall forecast, Event based hydrological modelling, 1D Flood modelling and field trip for data collection
07/2014-02/2015	Risk and Insurance Engineer, RMSI Pvt.Ltd, Noida, India Tasks: GIS mapping and 1D Riverine flood modelling at the selected Indian cities

Workshops and Seminars

12/2021	Introduction to Python Programming and its applications in water resources Organiser: National Water Academy (NWA), Pune, India Host: Central Water Commission (CWC), India
03/2018	GIAN course on "Weather Radar and Hydrology" Organiser: Indian Institute of Technology Madras, India
06/2015	ISPRS Summer School 'Online Sharing of Geospatial Data, Algorithm and Model'. Organiser: Indian Institute of Remote Sensing (IIRS) and Wuhan University
03/2015	Recent advances in water resources and environmental engineering computation. Organisers: Indian School of Mines, Dhanbad, India and Texas Tech University, USA

Software Knowledge

Programming	R, Python, Matlab
H-H modeling	HEC-HMS, HEC-RAS 2D, SWAT, TOPMODEL
RS & GIS	ArcGIS, QGIS, Map Window GIS, Google Earth Engine, Erdas Imagine

Awards

12/2019	International travelling fund from IIT Hyderabad to attend the "AGU Fall Meeting 2019" at San Francisco, USA.
01/2016	Doctoral Fellowship from FAST-CoE project, IIT Hyderabad and MHRD, India.

Language Knowledge

Telugu	Native
English	Fluent (oral and written)
Hindi	Fluent (oral and written)

Personal activities and interests

Travelling, cooking, sports (volleyball, badminton, cricket, swimming)

References

- **Dr. Satish Regonda**, Head, Department of Climate Change and assistant professor, Department of Civil Engineering, Water Resources Engineering, IIT Hyderabad, Kandi - 502284, India, satishr@ce.iith.ac.in , Mobile: +91 9581118374.
- **Dr. K.B.V.N Phanindra**, Associate professor, Department of Civil Engineering, Water Resources Engineering, IIT Hyderabad, Kandi- 502284, India, phanindra@ce.iith.ac.in , Tel (O): +9140 2301 6306.
- **Dr. Praveen K. Thakur**, Scientist/Engineer- SG &Head, Water Resources Department, Indian Institute of Remote Sensing (IIRS) - ISRO, Dehradun, 248001,Uttarakhand, India (https://www.iirs.gov.in/Praveen_Kumar_Thakur),Principal investigator of DMS project at IIRS-ISRO, Phone No (Office): +91 135 252 4162; Mobile: +91-8755827524, Email: praveen@iirs.gov.in
- **Dr. Suruchi Engelhardt**, Geodataengineer, Hole kommune, Norway, Mentor during DMS project tenure at IIRS-ISRO, Phone No: +47-94980958, Email: Suruchi.Engelhardt@hole.kommune.no