

## Dr. SANDEEP THAKUR

Assistant Professor,  
Department of Environmental Studies,  
University of Delhi-110019

**Email:** [sandeep.thakur@ramanujan.du.ac.in](mailto:sandeep.thakur@ramanujan.du.ac.in); [sandeep.pu@gmail.com](mailto:sandeep.pu@gmail.com)

**Contact No:** +91-7044390487, +91 7903773492



**Research Interest:** Earth & Environmental Sciences, Coastal Geomorphology, Remote Sensing and GIS, Disaster Management, Hazard, Vulnerability and Risk mapping, Wetland mapping, Coastal Ecology

### WORK EXPERIENCE:

<i>Sl. No</i>	<i>Position</i>	<i>Employer</i>	<i>DURATION</i>	<i>Research Projects/Work Profile</i>
1	<b>Assistant Geologist (Gazetted)</b>	Geological Survey of India	Dec' 2019- Aug' 2023	Geomorphic and morphometric analysis of river basin; LULC time series mapping, Image pre-processing, image analysis, river channel migration studies; section logging, sample collection- OSL, Grainsize, Palynology, SEM and XRD for paleoclimate condition, sedimentation, paleo channel related analysis; Flood hazard mapping and modelling; Shoreline mapping and shoreline time series studies and position forecasting; NGCM field sampling of stream sediment/slope wash samples, soil C horizon and regolith, heavy minerals; preparing element distribution maps of package A, B, C, D & H, statistical analyses of results <b><u>Engaged in Park and Museum cell and Technical consultancy division, GSI ER</u></b>
2	<b>Senior Team Member, RAF</b>	Pragya, NGO	May 2014- Feb 2015	Data analysis, Project proposal, and Rehabilitation works in Uttarakhand villages post flood events, Monitoring relief aids in J& K Floods, Research article writing, technical report writing
3	<b>Research Intern</b>	National Institute of Disaster Management (NIDM)	Feb 2014- April 2014	Preparing Training Assessment reports. Preparing Training modules, Content & curriculum development, facilitate in capacity building programmes
4	<b>Junior Research Fellow</b>	Central Agricultural Research Institute (CARI), Port Blair	Aug 2012-March 2013	Impacts of climate change on Coral reefs of Andaman (NRSC funded Project) by utilizing Geospatial techniques, Chemical analysis of water, Snorkelling, Statistical analysis, SCUBA
5	<b>Assistant Teacher</b>	Sunrise English Medium School,	June 2009-June 2010	Teaching; Grading of Answer sheets, Physical training teacher

	Mushalpur Assam		
--	--------------------	--	--

### ACADEMIC DETAILS:

Degree	Board/University	Year
PhD	University of Calcutta	2020 (Submitted) 2022 (Awarded)
M.Sc.	Pondicherry University	2012
B.Sc.	Cotton College, Gauhati University	2009
XII <sup>th</sup>	Cotton College, Assam Higher Secondary Educational Council (AHSEC)	2005
X <sup>th</sup>	St. John's school, Secondary Educational Board of Assam (SEBA)	2003

### SKILL SET:

<b>Desktop-Applications</b>	MICROSOFT OFFICE SUITE, INTERNET APPLICATIONS
<b>Geographical Information System (GIS) Software</b>	ARC GIS, Q GIS, Grass GIS, SURFER
<b>Digital Image Processing Software (DIP)</b>	ERDAS IMAGINE, ENVI, SEADAS, ACOLITE, SARC VIEW, SIGMA SAR, SNAP, NEST
<b>Survey Instruments</b>	GPS, TOTAL STATION
<b>Hydrographical Instruments</b>	pH METER, REFRACTOMETER, SNORKEL & MASKS, SECHHI DISK, NISSKINS' WATER SAMPLER. ICP MS
<b>Statistical Software</b>	SPSS, MS Excel, R studio, MINITAB

### CERTIFICATIONS

- Completed “**Advance training on Quaternary Mapping**” conducted by Geological Survey of India, Regional Training Division, Lucknow from 05.05.2022 to 14.05.2022.
- Completed E-Training on “**Basic Course on PGRS using ArcGIS for pre-field studies**” conducted by RTD, NER, GSI Training Institute, NER Shillong from 04.06.2021 to 10.06.2021.
- Completed E-training on “**Basic Course on ArcGIS and its Application for RMT**” conducted by RTD, ER, GSITI, Kolkata from 08.10.2020 to 15.10.2020
- Completed E-training on “**Basic Course on Application of Geochemical Analytical Data in Earth Sciences**” conducted by RTD, WR, GSI, Jaipur from 21.09.2020 to 25.09.2020.

- Completed **‘ORIENTATION COURSE FOR ASSISTANT GEOLOGIST’** conducted by Geological Survey of India Training Institute, Hyderabad from 19.12.2019 to 10.08.2020
- Completed 12 weeks’ certificate programme on **“Applications of Geospatial technologies”** at NRSC, ISRO, Hyderabad from Nov 2015-Jan 2016
- Completed 1-week certificate programme on **“Hyperspectral Remote Sensing”** at NRSC, ISRO, Hyderabad in 08.08.2016 to 12.08.2016
- Completed 2-week certificate programme on **Microwave Remote Sensing** at NRSC, ISRO, Hyderabad in 2016
- Cleared **CSIR NET in Earth sciences, All India rank 07 held in June 2012**

## RESEARCH PROJECTS/INTERNSHIPS:

<i>SI. No</i>	<i>DETAILS</i>	<i>DETAILS OF WORK DONE</i>	<i>DURATION</i>	<i>INSTITUTION</i>
1	<b>Ph.D. Thesis</b>	Assessment of Environmental stress on the mangrove ecosystems of Sundarbans India	5 YEARS	University of Calcutta
2	<b>Dissertation/ Project work</b>	Analysis of characteristic features of Cyclones in the North Indian Ocean for 122 years and a case study of the recent Cyclone THANE using satellite imageries	5 months	Pondicherry University
3	<b>Internship</b>	Impact of Heat wave over the coastal districts of Orissa	1 month	Orissa State Disaster Management Authority (OSDMA)
4	<b>Internship</b>	A Study of Thunderstorm characteristics in North Eastern Region of India during pre-monsoon season 2011	1 month	North Eastern Space Application centre (NESAC)

## WORKSHOPS ATTENDED:

<i>SI. No</i>	<i>Level</i>	<i>Workshop</i>	<i>Status</i>	<i>Venue</i>
1	International	Towards data science in climate research: perspectives on Climate Extremes", 14-18th October, 2019	Participated	TERI, New Delhi
2	International	SGRIP/CEP (1-Micro Credit) Course on Earth Observation Data for Forest and Agriculture Carbon Modelling, 22-28 feb 2019	Participated	IIT Kharagpur
3	International	Coastal and Ocean Management, 28 Jan – 1 Feb, 2019	Participated	Indian Institute of Remote sensing(IIRS), Dehradun
4	International	Species Distribution Modelling with MaxEnt and R - 2nd Chapter, 3-9 Dec, 2018	Participated	Indian statistical Institute(ISI), Kolkata
5	National	3 days training on Geospatial technology by Dept of Science & Technology, India, 2015	Participated	Sathyabhama University chennai
6	National	Workshop on 'Mountain agriculture assistance system'2014	Part of organizing team, wrote	IHC, New Delhi

			background paper	
--	--	--	---------------------	--

## PUBLICATIONS:

h-index: 12

i10-index: 12

Total Citations: 396

SCI rated refereed Journals: 13

Conference Proceedings: 7

Book Chapters: 2

Research gate Link: <https://www.researchgate.net/profile/Sandeep-Thakur-8>

Google Scholar Link: <https://scholar.google.com/citations?user=3sbrpeMAAAAJ&hl=en>

## COMPLETE LIST OF PUBLICATIONS

### REFEREED JOURNALS

<i>SI.No</i>	<i>Title</i>	<i>Authors &amp; Year</i>	<i>Journal Name &amp; Publication</i>	<i>Impact Factor</i>	<i>Indexed in</i>
1	Estimation of Chlorophyll-a, TSM and salinity in Mangrove dominated Tropical Estuarine areas of Hooghly River, North East Coast of Bay of Bengal Using Sentinel-3 data	Mondal I, De A, Nandi S, Thakur S, Raman M, Jose F, De TK (2023)	Acta Geophysica & Springer Nature	2.3	Scopus
2	Assessing the multi-decadal shoreline dynamics along the Purba Medinipur-Balasore coastal stretch, India by integrating remote sensing and statistical methods	Hossain SK, Mondal I, Thakur S, Linh NTT, Anh DT (2022)	Acta Geophysica & Springer Nature	2.3	Scopus
3	Coastal vulnerability assessment of India's Purba Medinipur-Balasore coastal stretch: A comparative study using empirical models	Hossain SKA, Mondal I, Thakur S, Al-Quraishi AMF (2022)	International Journal of Disaster Risk Reduction & Elsevier	5	Scopus
4	Application of the METRIC model for mapping evapotranspiration over the Sundarban Biosphere Reserve, India	Mondal I, Thakur S, De A, De TK (2022)	Ecological Indicators & Elsevier	6.9	Scopus
5	Comparative analysis of forest canopy mapping methods for the Sundarban biosphere reserve, West Bengal, India	Mondal I, Thakur S., Juliev M., & De TK (2021)	Environment, Development and sustainability, Springer Nature	4.9	Scopus
6	Shoreline changes and its impact on the mangrove ecosystems of some Islands of Indian Sundarbans, North- East coast of India	Thakur S., Bar S, Mondal I, Ghosh P.B., Das P. and De T.K (2020)	Journal of cleaner Production; Elsevier	11.1	Scopus

7	Spatio-temporal modelling of shoreline migration in Sagar Island, West Bengal, India	Mondal I, <b>Thakur S.</b> , Juliev M., Bandyopadhyay J., & De T K (2020)	Journal of coastal conservation	2.1	Scopus
8	Spatial and seasonal distribution of multi-elements in suspended particulate matter (SPM) in tidally dominated Hooghly River estuary and their ecotoxicological relevance	Mitra S., Sudarshan M., Jonathan MP., Sarkar SK., and <b>Thakur S</b> (2020)	Environmental Science and Pollution Research & <b>Springer Nature</b>	5.8	Scopus
9	The Assessment of changes in Land Use Land Cover and Land Surface Temperature in the Mangrove Forest of Sundarbans, North-East Coast of India	<b>Thakur S.</b> , Maity D, Mondal I, Basumatary G, Ghosh P.B., Das P. and De T.K, (2020)	Environment sustainability and Development, <b>Springer Nature</b>	4.9	Scopus
10	Delineating Lateral Channel Migration and Risk Zones of Ichamati River, West Bengal, India	Mondal I, <b>Thakur S</b> , Bandyopadhyay J(2019)	Journal of cleaner production & <b>Elsevier</b>	11.1	Scopus
11	Application of multispectral remote sensing in the study of mangrove ecosystems with special emphasis on Image processing techniques: A Review	<b>Thakur S.</b> , Mondal I, Ghosh P.B., Das P. and De T.K (2019)	Spatial Information Research, Springer Nature	2.4	Scopus
12	Shoreline Change Detection Using Remote Sensing in the Bakkhali Coastal Region, West Bengal, India	<b>Thakur S.</b> , Dey D., Das P., Ghosh P.B., De T.K. (2017)	Indian journal of Geosciences, <b>GSI, Ministry of Mines</b>		UGC,
13	Influence of anthropogenic activities on the land use patterns of South Andaman Islands	<b>Thakur S.</b> , Dharanirajan K, Ghosh P.B., Das P. and De T.K. (2017)	Research Journal of Marine Sciences, <b>ISCA</b>		
14	A report on salinity-governance of auxospore size in euryhaline diatoms of a well-mixed estuary on North-Eastern Coastal Bay of Bengal	Mukherjee A, Chakraborty S, Das S, Mondal R, Basu S, <b>Thakur S</b> and De TK (2015)	Brazilian Journal of Biological Sciences; ISSN 2358-2731		

## **BOOK CHAPTERS**

1. Mondal I., **Thakur S.**, De. A., Bandopadhyay J., De T.K. (2022) Estimating water quality of Sundarban Coastal Zone Area using Landsat series satellite data; River Health and Ecology in South Asia; pp 155-176
2. Mondal I., **Thakur S.**, Ghosh P.B., De T.K. (2021) Assessing the Impacts of Global Sea Level Rise (SLR) on the Mangrove Forests of Indian Sundarbans Using Geospatial Technology; Geographic Information Science for Land Resource Management; Scrivener Publishing Wiley

## SYMPOSIUM PROCEEDINGS

1. **Thakur S.**, Mondal I, Das P, Ghosh P.B., De T.K. (2018), Time Series Analysis of Shoreline Oscillations and Its Repercussion on the Mangrove Ecosystems Around Bakhali Island in Sundarban Delta, Eastern India, conference proceedings, BIODIVERSE 2018
2. **Thakur S.**, Maity D., Ghosh PB, Das P, De TK (2017), Analyzing Land Surface Temperature Distribution From Land Use Landcover Changes In Sundarbans, India, Conference proceedings, ACRS 2017, <http://www.a-a-r-s.org/acrs/index.php/acrs/acrs-overview/proceedings1?view=publication&task=show&id=2785> .(Scopus indexed)
3. Mondal I., **Thakur S.**, Ghosh P.B., De T.K., Bandyapadhyay J (2018), Assessing the Impacts of Global Sea Level Rise (SLR) on the mangrove forests of Indian Sundarbans using Geospatial Technology, BIOSPECTRUM 2018, 2nd International Conference on Biotechnology and Biological Sciences
4. **Thakur S.**, Mondal I, Ghosh P.B., De T.K. (2018) Thunderstorm characteristics over the North Eastern Region (NER) of India during the Pre-Monsoon season, 2011 using Geosynchronous Satellite Data, Emerging Technologies in Data Mining and Information Security; Proceedings of IEMIS 2018, Volume 2, Springer publications, ISSN No- 21945357
5. Mondal I., **Thakur S.**, Ghosh P.B., De T.K., Bandyapadhyay J (2018), Land Use/Land Cover Modelling of Sagar Island, India using Remote Sensing and GIS Techniques, Emerging Technologies in Data Mining and Information Security; Proceedings of IEMIS 2018, Volume 2, Springer publications, Springer publications, ISSN No- 21945357
6. **Thakur S.**, Mondal I, Ghosh P.B., De T.K. (2018), Assessment of changes in the environmental components during a Thunderstorm using Automated Weather Station (AWS) data, SPECTRUM 2018 *Emerging Trends in Science and Technology*, Narosa publications, ISBN – 978-81-8487-642-0
7. Mondal I., **Thakur S.**, Ghosh P.B., De T.K., Bandyapadhyay J (2018), Morpho dynamic study of Ichamati River basin using Geospatial Techniques and its impact on the local environment, SPECTRUM 2018 *Emerging Trends in Science and Technology*, Narosa publications, ISBN – 978-81-8487-642-0

## LIST OF PAPERS IN CONFERENCES/ ATTENDED CONFERENCES

<i>SI. No</i>	<i>Level</i>	<i>SYMPOSIUM NAME &amp; Date</i>	<i>Paper Title &amp; Authors</i>	<i>Status</i>	<i>Venue</i>
1	International	E conference on River Mouth Systems and Marginal Seas – Natural Drivers and Human Impacts	Influence of regional tectonics, sedimentation and human intervention in smaller seabound river systems: A case study from Subarnarekha River Ghatak M, Gupta S, and <b>Thakur S</b>	Online Presentation	Universit Szczecin, Helmholtz Zentrum Hereon



		Dec 05-07, 2022			
2	International	BIODIVERSE 2018- 27-29 Jan' 2018	Time Series Analysis of Shoreline Oscillations and Its repercussion on the Mangrove ecosystems around Bakhali Island in Sundarban Delta, Eastern India <b>Thakur S</b> , Mondal I, Ghosh PB, Das P & De TK	POSTER presentation	IIT Guwahat India
3	International	SPECTRUM 2018 <i>Emerging Trends in Science and Technology-</i> 17 Feb' 2018	Assessment of changes in the environmental components during a Thunderstorm using Automated Weather Station (AWS) data <b>Thakur S</b> , Mondal I, Ghosh PB and De TK	ORAL Presentation	IEM, Kolkata, India
4	International	SPECTRUM 2018 <i>Emerging Trends in Science and Technology-</i> 17 Feb' 2018	Morphodynamic study of Ichamati River basin using Geospatial Tehniques and its impact on the local environment Mondal I, <b>Thakur S</b> , Ghosh PB, De TK <sup>and</sup> Bandyopadhyay J	Co author/ ORAL	IEM Kol India
5	International	IEMIS 2018 <i>International Conference on Emerging Technologies in Data Mining and Information Security-</i> 23-25 Feb' 2018	Thunderstorm characteristics over the North Eastern Region (NER) of India during the Pre-Monsoon season, 2011 using Geosynchronous Satellite Data <b>Thakur S</b> , Mondal I, Ghosh PB and De TK	ORAL Presentation	UEM, Kolkata, India
6	International	IEMIS 2018 <i>International Conference on Emerging Technologies in Data Mining and Information Security-</i> 23-25 Feb' 2018	Land Use/Land Cover Modeling of Sagar Island, India using Remote Sensing and GIS Techniques Mondal I, <b>Thakur S</b> , Ghosh PB, De TK and Bandyopadhyay J	Co author/ ORAL	UEM, Kolkata, India
7	International	BIOSPECTRUM' 2018	Assessing the impacts of global sea level rise on the mangrove forests of Indian Sundarbans using geospatial technology Mondal I, <b>Thakur S</b> , Ghosh PB, De TK and Bandyopadhyay J	Co author/ ORAL	UEM, Kolkata, India
8	International	Asian conference on Remote Sensing (ACRS) 2017- 23-27 Oct' 2017	Analyzing Land Surface Temperature Distribution from Land Use Land Cover Changes in Sundarbans, India. <b>Thakur S</b> , Maity D, Ghosh PB, Das P, De TK	ORAL Presentation	The A hotel, Delhi

9	National	Emerging trends in Environmental Sciences, 2016	Na	Participated	Calcutta University, Kolkata
10	National	Industrial Pollution control using emerging technologies, 2016	NA	Participated	Jadavpur University, Kolkata
11	National	Innovative Technologies for Conservation and Sustainable Utilization of Island Biodiversity (NSCIB-2012)	NA	Participated	CARI, Blairgowrie, Blairgowrie, Blairgowrie
12	National	3 <sup>rd</sup> Indian National Congress for Landslides and Natural Disasters, 2012	Impacts of heat wave on the coastal districts of Odisha <b>Thakur S, Ramanujan N, Mishra BN</b>	Presented paper	Pondicherry University

### **AWARDS/ACHIEVEMENTS:**

- Cleared **UPSC Assistant Geologists** examination 2016-17
- **DST INSPIRE FELLOWSHIP** for pursuing Ph.D.
- Recipient of **PONDICHERRY UNIVERSITY GOLD MEDAL** in M.Sc. examinations
- Recipient of **DISTRICT AWARD FOR OUTSTANDING MARKS** in high school exams.

### **PEER REVIEWER OF THE FOLLOWING JOURNALS**

- Ocean and Coastal management
- Environment Development and Sustainability
- Geocarto International
- Journal of Cleaner Production
- Spatial information research
- Heylion
- Journal of Coastal Research
- Environmental Monitoring and Assessment

### **MEMBERSHIP OF ACADEMIC / PROFESSIONAL BODIES**

- Indian Society of Remote sensing (ISRS)
- Indian National Science Association (INSA)
- International Association for Promoting Geoethics (IAPG)
- Indian Red Cross Society (IRCS)

### EXTRA-CURRICULARS:

- Table Tennis champion at university level
- Represented College as a Batsman in inter college competitions
- Have represented school in Basketball and various parade competitions
- Hobbies include playing sports and reading fictional books

The above-mentioned information furnished by me is correct to the best of my knowledge and belief. I shall leave no stone unturned to satisfy you.

Place: Kolkata

Date: 25/08/23

Dr. Sandeep Thakur