

# PROF. (DR.) ABHISEK SANTRA

**OFFICE ADDRESS**

ADAMAS UNIVERSITY, Adamas Knowledge City, Barasat – Barrackpore Road, P.O. – Jagannathpur, District – 24 Parganas (North), Kolkata – 700126, West Bengal, India.

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**PRESENT / PERMANENT ADDRESS**

Flat No: 901, Tower 1, Downtown, Uniworld City, New Town, Action Area III, Kolkata – 700156, West Bengal, India.

**RESEARCH AREAS OF INTEREST:**

Biomass Estimation and Carbon Sequestration; Air Pollution and Quality; Climate Change Impact Analysis; Wetland Dynamics; Coastal Change Analysis; Urban Ecology; Urban Impervious Feature Detection and Sprawl Analysis; Urban Heat Island; River Basin Management; Soil Moisture and Crop Yield Estimation; Drought Severity and Soil Erosion Modelling; Calibration and Validation of Earth Observation Data;

**OBJECTIVE:**

To teach students at post-graduation level, supervise Ph.D. students, conduct researches and execute academic research projects with particular focus on Applications of Geoinformatics in Earth and Environmental Science in collaboration with academic and industrial institutions.

**EMPLOYMENT:**

- Professor of Geography, Department of Geography, School of Basic and Applied Science, Adamas University (From August 1<sup>st</sup>, 2024, to till date)
- Associate Professor of Geography, Department of Geography, School of Basic and Applied Science, Adamas University (From December 20<sup>th</sup>, 2021, to July 31<sup>st</sup>, 2024)
- Associate Professor of Remote Sensing and Coordinator of Geoinformatics Cell, Department of Civil Engineering, Haldia Institute of Technology (From August 21, 2014 to November 24, 2021)

# Curriculum Vitae

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- Visiting Professor, Haldia Institute of Management (From October 2014 to 2016)
- Assistant Professor, Department of Remote Sensing, Birla Institute of Technology, Mesra (From January 01, 2014 to August 17, 2014)
- Assistant Professor, Dept. of Civil Engineering, and Assistant In-charge of Examination, Birla Institute of Technology, Mesra (Patna Campus) (From March 01, 2012 to December 31, 2013)
- Project Manager, West Bengal State Marketing Board, Govt. of West Bengal and National Informatics Centre, Govt. of India (From May 2009 to August 2010)
- Lecturer, Dept. of Geography, Syamaprasad College, University of Calcutta (From February 2005 to May 2009)

## EDUCATION:

- **Ph. D. (2010): University of Calcutta, India.** Subject / Area: Geo-statistical and Quantitative River Basin Resource Appraisal
- **M.S. (2011): University of Southampton, UK.** Subject / Area: Applied GIS & Remote Sensing with specialization in Calibration and Validation of EO Data
- **M.Sc. (2004): University of Calcutta, India.** Subject / Area: Geography with specialization in Cartography and Remote Sensing
- **MBA (2024): Manipal University, Jaipur, India.** Subject / Area: Human Resource Management
- **PG Diploma (2009): University of Twente (ITC), the Netherlands and Indian Institute of Remote Sensing (IIRS) (ISRO), India.** Subject / Area: Geoinformation Science in Earth Observation with specialization in Coastal Modelling
- **B.Sc. (2002): University of Calcutta, India.** Subject / Area: Geog. (Major) and Geol. (Minor)

## EXTERNAL FUNDED PROJECT EXPERIENCE:

1. *Modelling Urban Sprawl Dynamics of Howrah-Kolkata Urban Agglomeration by Semi-Automated Impervious Feature Extraction Techniques using Multi-Sensor Remotely Sensed Data* (as PI) (**SERB, GOI Funded**) (May 2018 to May 2021) (Rs. 24.21 Lakhs) (No. EMR/2017/002838)

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2. *Modelling runoff variability and predicted runoff condition of a semi-gauged river basin of tropical India as a response to climate change and transformed landuse landcover (LULC) (as Co-PI) (SERB, GOI Funded) (October 2017 to October 2020) (Rs. 37.14 Lakhs) (No. EMR/2016/006380)*
3. *Synergic use of Multi-Sensor Optical and SAR Remote Sensing for Monitoring Inventory based Multi-scale REDD+ MRV for Indian Forests (SERB, GOI Funded) (June 2016 to June 2018) (Rs. 17.54 Lakhs) (No. PDF/2015/000043)*
4. *GIS mapping of urban utilities of Howrah Municipal Corporation as Project Coordinator with WBEIDC Ltd. (WEBEL) (Funded by IT & E Department, Govt. of West Bengal) (Approved) (Rs. 1.94 Crores)*
5. *Crop suitability and potential soil erosion assessment in the drought prone Puruliya district of West Bengal as Project Investigator (UGC Funded Project) (March 2013 to August, 2014) (Rs. 6 Lakhs) [No.F. 20-7(19)/2012(BSR)]*
6. *Vegetation dynamics and impact of climate change on vegetation over Hindukush Mountain Range as Co-Project Investigator with ICIMOD, Nepal (NASA funded SERVIR Project) (Left on 17<sup>th</sup> August, 2014)*

### DOCTORAL AND POST-DOCTORAL RESEARCH GUIDANCE:

- Supervised **Dr. Suman Sinha** in 2018 as National Post-Doctoral Fellow (NPDF) on “*Synergic use of multi-sensor optical and SAR remote sensing for monitoring inventory-based multi-scale REDD+ MRV for Indian forests*” [funded by Science and Engineering Research Board (SERB), Dept. of Science & Technology (DST), Govt. of India]
- Supervised **Mr. N. K. Yadav** in 2024 for Ph.D. on “*Effect of landuse / landcover dynamics on the spatio-temporal changes of urban heat island and its effect on the environment*” from Dept. of Civil Engineering, National Institute of Technology, Durgapur.
- Supervising **Mrs. Pradipta Mallik** since December 2023 for Ph.D. on “*Geo-Environmental Appraisal of East Kolkata Wetland – A Geospatial Approach*” from Adamas University. [Ongoing]
- Supervising **Ms. Ankita Gupta** since 2022 for Ph.D. on “*Meghalaya Tourism – It’s Vulnerability and Susceptibility with reference to Geomorphic, Climatic, and Anthropogenic Activities*” from Adamas University. [Ongoing]

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### MASTERS DISSERTATION GUIDANCE:

- *Comparative Assessment of Above-Ground Biomass between Mangrove and Deciduous Forests* (M.Sc. in Geoinformatics) (Mr. Bivash Dhali) (2023-2025) (Ongoing).
- *Evaluating the Impact of Climatic and Edaphic Factors on Vegetation Dynamics Over Mayurakshi River Basin* (M.Sc. in Geography) (Ms. Anisha Saha) (2023-2025) (Ongoing).
- *Identification of Ecosystem's Health Using Geoinformatics – A Study of East Kolkata Wetland* (M.Sc. in Geoinformatics) (Ms. Rupsa Mondal) (2023-2025) (Ongoing).
- *Assessment of Soil Moisture and Crop Yield using Synergistic use of Optical and Microwave Remote Sensing – A Study of East Kolkata Wetland* (M.Sc. in Geoinformatics) (Ms. Ishita Bhowmick) (2023-2025) (Ongoing).
- *Space-time Dynamics of Urban Heat Islands in Industrial Cities of Asansol and Durgapur – A Thermal Remote Sensing Approach* (M.Sc. in Geoinformatics) (Ms. Abhishikta Biswas) (2023-2025) (Ongoing).
- *GIS-Based Multi-Criteria Decision Analysis for Flood Hazard Risk Assessment in Teesta River Basin* (M.Sc. in Geoinformatics) (Mr. Arup Sarkar) (2023-2025) (Ongoing).
- *Evaluation of Eco-Tourism Sites in Panchkedar, Garhwal Himalaya using Remote Sensing & Geographic Information System Techniques: Prospects and Planning* (M.Sc. in Geoinformatics) (Mr. Suchayan Dey) (2023-2025) (Ongoing).
- *Impact of Land Use and Land Cover on Wetland Dynamics – A Study of East Kolkata Wetland* (M.Sc. in Geoinformatics) (Ms. Payel Ghosh) (2023-2025) (Ongoing).
- *Spatio-temporal Dynamics of Agricultural Drought using Geoinformatics in Puruliya District* (M.Sc. in Geoinformatics) (Ms. Nigar Sultana Biswas) (2023-2025) (Ongoing).
- *Identification of Seismic Hazard Zones using Geoinformatics Techniques – A Study of North Eastern India* (M.Sc. in Geoinformatics) (Ms. Bhagyasghree Biswas) (2023-2025) (Ongoing).
- *Agro-Ecological Zoning and Crop Suitability Analysis – A Study of Tripura* (M.Sc. in Geography) (Ms. Debika Das) (2023-2025) (Ongoing).
- *Integrating Multicriteria Decision Analysis and Machine Learning for Groundwater Potential Zonation in Puruliya District of West Bengal* (M.Sc. in Geoinformatics) (Ms. Papia Das) (2022-2024) (Completed).

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- *Estimation of Air Quality using Sentinel 5P Tropomi data - A comparative analysis between selected mega cities of India* (M.Sc. in Geoinformatics) (Ms. Titir Metey) (2022-2024) (Completed).
- *Predictive Modeling of Shoreline Dynamics and Erosion along the West Bengal Coastline: A Case Study from Digha to Rasulpur River Coastal Stretch* (M.Sc. in Geoinformatics) (Mr. Md. Nurul Hassan) (2022-2024) (Completed).
- *Channel Shifting and Morphological Analysis of the Rupnarayan-Dwarakeshwar Basin – A GIS Based Analysis* (M.Sc. in Geoinformatics) (Ms. Epsita Banerjee) (2022-2024) (Completed).
- *Modelling Soil Erosion using Google Earth Engine – A Study of Dwarakeshwar-Rupnarayan River Basin* (M.Sc. in Geoinformatics) (Ms. Tanisha Paul) (2022-2024) (Completed).
- *Analyzing Quality of Life in West Bengal using Multi-Criteria Decision Analysis* (M.Sc. in Geoinformatics) (Ms. Meghadri Das) (2022-2024) (Completed).
- *Evaluating Soil Erosion Models on Rupnarayan-Dwarakeshwar Basin: A Geoinformatics-Based Comparative Analysis* (M.Sc. in Geoinformatics) (Mr. Somnath Chatterjee) (2022-2024) (Completed).
- *Comparative Analysis of Urban Growth Patterns: Identifying Trends and Dynamics* (M.Sc. in Geoinformatics) (Ms. Paulomi Das) (2022-2024) (Completed).
- *Landslide Hazard Zonation of Meghalaya in North-East India* (M.Sc. in Geoinformatics) (Ms. Payel Mondal) (2022-2024) (Completed).
- *Assessment of Soil Erosion by RUSLE Model using Remote Sensing and GIS: A Case Study of Digha, Shankarpur, Mandarmani and Junput* (M.Sc. in Geoinformatics) (Ms. Shefa Ummehani) (2022-2024) (Completed).
- *Spatio – temporal dynamics of East Kolkata Wetland – A Geoinformatics based Approach* (M.Sc. in Geoinformatics) (Ms. Karabi Basu) (2021-2023) (Completed).
- *Paddy Yield Modelling Using Selected Physical Factors – A Multi-Sensor Geoinformatics Approach in Data Spare Region* (M.Sc. in Geoinformatics) (Ms. Simran Kumari Shah) (2021-2023) (Completed).
- *Siltation Identification in the Lower Course of Hooghly River using Multispectral Images* (M. Tech. in Computer Science) (Ms. Mousumi Panja) (2015-2017) (Completed).

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- *Monitoring Surface Coal Fire in Jharia using Thermal Remote Sensing* (M.Sc. in Geoinformatics) (Mr. Manmohan Singha) (2012-2014) (Completed).

### **ADMINISTRATIVE AND ACADEMIC RESPONSIBILITIES:**

- As a Board of Studies Member **prepared Syllabus and Course Structure for M.Sc. in Geography** under **Adamas University**.
- As a Board of Studies Member **prepared Syllabus and Course Structure for M.Sc. in Geoinformatics** under **Adamas University**.
- Serving as **School Coordinator of School of Basic and Applied Sciences in Adamas University** for **Internationalization of Adamas University** since 2022.
- As a Board of Studies Member **prepared B.Tech. Syllabus and Course Structure for Civil Engineering Programme** under **Maulana Abul Kalam Azad University of Technology (MAKAUT)** (Former WBUT) in 2019.
- Working as the **Faculty Coordinator of Haldia Institute of Technology for the Unnat Bharat Abhiyan Programme** under **Ministry of Human Resource Development, Govt. Of India**.
- **Setup the Geoinformatics Cell**, a dedicated research and development wing under the Dept. of Civil Engineering, Haldia Institute of Technology in 2015.
- **Served as In-Charge (interim period) in Dept. of Civil Engineering, Haldia Institute of Technology**.
- **Convenor of Entrepreneurship Development Cell (e-Cell)** of Haldia Institute of Technology (2016-2018)
- **Prepared Academic and Administrative Audit Reports of NAAC** for Dept. of Civil Engineering, Haldia Institute of Technology.
- **Prepared NBA Self-Assessment Report (SAR)** and acted as **Coordinator** for Dept. of Civil Engineering, Haldia Institute of Technology.
- Working as **Mentor of Dept. of Civil Engineering** of Global Institute of Science & Technology for **NBA accreditation** since 2019.
- **Prepared accreditation reports of NAAC and NBA** for Dept. of Remote Sensing, Birla Institute of Technology, Mesra.

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- Acted as **Nodal Person to setup Remote Sensing Department in BIT Mesra (Patna Campus)** and prepared and submitted Detailed Project Report (DPR) to DST, Govt. of Bihar.
- Served as **Assistant In-Charge of Examination** in BITMesra (Patna Campus).
- Acted as **Expert in selecting Engineers for Bihar Public Service Commission (BPSC)**, Govt. of Bihar.

### **OTHER PROFESSIONAL EXPERIENCE:**

- Prepared Report on Boundary Wall Demarcation for Biecco Lawrie Limited as a Coordinator of Geoinformatics Cell, Haldia Institute of Technology in 2019.
- Prepared Syllabus and Course Structure for M.Tech. in Remote Sensing and GIS under Haldia Institute of Technology for the Autonomous Status in 2019.
- Guided several theses for M.Sc. in Geoinformatics, M.Tech. in Computer Science and B.Tech. in Civil Engineering
- Prepared syllabus, course structure and monitoring other related matters for the proposed Haldia University.

### **CURRENT TEACHING AREAS:**

#### **Odd Semester:**

**M.Sc. in Geoinformatics:** Digital Image Processing (1<sup>st</sup>Semester) (GEO21303)  
Digital Image Processing Lab (1<sup>st</sup> Semester) (GEO22304)  
Geoinformatics – II (GEO21330)  
Geoinformatics – II Lab (GEO22331)  
Advanced Remote Sensing (3<sup>rd</sup> Semester) (GEO21311)  
Advanced Remote Sensing Lab (3<sup>rd</sup> Semester) (GEO22312)

#### **Even Semester:**

**M.Sc. in Geoinformatics:** Principles of Geospatial Analysis (2<sup>nd</sup> Semester) (GEO21307)  
Geoinformatics II Theory (GEO21330) and Lab (GEO22331) (2<sup>nd</sup> Semester)

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**M.Sc. in Geography:** Geoinformatics II Theory (GEO21251) and Lab (GEO22252) (2nd Semester)  
Advanced Elective Theory II: Remote Sensing and GIS (4<sup>th</sup> Semester) (GEO21241)  
Advanced Elective Practical II: Remote Sensing and GIS (4<sup>th</sup> Semester) (GEO22242)

### **AWARDS AND ACHIEVEMENT:**

- **Reviewer of ISPRS Journal of Photogrammetry and Remote Sensing (Elsevier/ScienceDirect), Urban Climate (Elsevier/ScienceDirect), Remote Sensing Applications: Society and Environment (Elsevier/ScienceDirect), Environmental Challenges (Elsevier/ScienceDirect), Natural Hazards Research (Elsevier/ScienceDirect), Heliyon (Elsevier/ScienceDirect), Spatial Information Research (Springer), GIScience & Remote Sensing (Taylor & Francis), Geocarto International (Taylor & Francis), Journal of Applied Remote Sensing (SPIE), Environmental Earth Science (Springer), Stochastic Environmental Research and Risk Assessment (Springer), Journal of Earth System Science (Springer), Current Science (Indian Academy of Sciences), Environmental Monitoring and Assessment (Springer), Earth Science Informatics (Springer), Forests (MDPI), Geospatial Information Science (Taylor & Francis), American Journal of Remote Sensing, Positioning, International Journal of Geomatics and Geosciences, International Journal of Advancement in Remote Sensing, GIS and Geography (IJARSGG),.**
- **Honoured as a Reviewer Board Member of Mediterranean Geosciences Union.**
- **Honoured as an External Expert for Ph.D. Research Executive Advisory Council at Ramakrishna Mission Vivekananda Educational and Research Institute (RKMVERI) (NAAC A++ Graded Deemed University)**
- **Honoured as a Board of Studies (BOS) Member of the Maulana Abul Kalam University of Technology (MAKAUT) [Former West Bengal University of Technology (WBUT)] for preparing University Course Structure and Syllabus in 2019.**
- **Invited to deliver a talk on “Application of Remote Sensing in Natural Resource**



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Management” in One-Day State Level Seminar on Application of Geospatial Technology in Academics on 4<sup>th</sup> April, 2024, Organized by the Dept. of Geography, Maharani Kasiswari College, University of Calcutta.

- Acted as **Convener in “Industry Connect 2022: Industry & Academia Synergy”** on 24th June, 2022 organized by the Dept. of Geography, School of Basic and Applied Sciences (SoBAS), Adamas University, India.
- Acted as **Session- Chair in “Technical Session VII: Application of GI Science in Health Research” of International Conference on Environment and Health – Frontiers Ahead**” from 25th to 26th February, 2022 organized by the Adamas University, India.
- Acted as **Session- Chair in “Urban Environment Issues and Challenges” of XVth DGSi International Online Conference on “Climate Change, Disasters & Sustainable Livelihood”** from 26th to 28th November, 2020 organized by the University of Allahabad, India.
- **Invited to deliver a talk session** on “Forestry and Urban Applications of Remote Sensing Data” in Regional Workshop on “Multi-Disciplinary Approach to Remote Sensing – Recent Trends” organised by the Indian Society of Remote Sensing, Kolkata Chapter on 11<sup>th</sup> August, 2017.
- Organized *National Conference on Advancement in Civil Engineering Practice and Research (ACEPR) as Convener* at Haldia Institute of Technology, Haldia, West Bengal, India during 5<sup>th</sup>-6<sup>th</sup> April, 2018.
- Organized *National Seminar on “Recent Development in Design of Steel Structures (RDDSS-2017)” as Convener* at Haldia Institute of Technology, Haldia, West Bengal, India during 19<sup>th</sup>-20<sup>th</sup> April 2017
- Honoured as a **member of the Editorial Review Board** of Amity Journal of Research, Innovation and Commercialization (AJRIC) in 2016
- Honoured as the **Editorial Board Member** of the International Journal of HIT Transaction on ECCN in 2015
- Honoured and working as **Reviewer of Science and Engineering Research Board (SERB), Department of Science & Technology (DST), Govt. of India funded R&D projects** since 2016.
- **Invited to deliver a talk** on “Contemporary Trends of Research in Geo-Information

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Science” in Faculty Development Programme organised by Dept. of Computer Science and Engineering, Haldia Institute of Technology on 15<sup>th</sup> July, 2015.

- Invited to a talk session on “Energy Conservation and Fuels” in International Symposium on Energy Challenges and Mechanics to be held in 2015 within the University of Aberdeen, Scotland, United Kingdom.
- Offered and accepted to be official reviewer of an international journal "Positioning" organized by Wuhan University, China in 2014
- Organized *National Conference on Environment Friendly Sustainable Construction – Need of the Hour as a Coordinator* at BIT Mesra (Patna Campus), India during 2-3<sup>rd</sup> March, 2013
- Invited to deliver lecture on “Environmental Applications of Remote Sensing” in UGC sponsored National Workshop in 2013, organised by Patna Women’s College.
- Honoured as a **Member to Judge Doctoral Thesis Presentation** in BIT International Conclave 2013 on “Innovations in Engineering and Management” organized by Birla Institute of Technology (Mesra) Patna Campus in 2013.
- Honoured as **Editor in the Editorial Board** of International Journal of Advancement in Remote Sensing, GIS and Geography (IJARSGG) in 2013.
- **International Scholarship for pursuing M.S.** in Applied GIS and RS
- **Ranked 1<sup>st</sup>** in the PG Diploma Course of Geo-Information Science in Earth Observation at IIRS, India and University of Twente (ITC), Netherlands in 2009
- **Qualified National Eligibility Test (NET) for Lectureship**, conducted by University Grants Commission (UGC), Govt. of India in 2006.
- **Ranked 1<sup>st</sup> in part II and 3<sup>rd</sup> in overall** assessment in the University of Calcutta in **M.Sc.** Examination in 2004.
- Awarded **National Scholarship** in Secondary Examination in 1997.

### **LIFE MEMBERSHIP:**

- Indian Society of Remote Sensing (ISRS)
- Indian National Cartographic Association (INCA)
- Indian Institute of Geomorphologists (IGI)

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- Geographical Society of India
- Institute of Landscape Ecology and Ekistics (ILEE)

## **COURSES AND CURRICULA DEVELOPMENT:**

- Developed and designed **M.Sc. in Geography and M.Sc. in Geoinformatics in Adamas University** (specifically Advanced GIS Theory and Practical; Advanced Remote Sensing Theory and Lab; Geoinformatics III Theory and Lab; Photogrammetry and Surveying Lab; Principles of Geospatial Analysis; Geospatial Analysis and its Applications Lab; Digital Image Processing Theory and Lab; Advanced Elective Theory and Practical I & II : Remote Sensing and GIS; Geoinformatics II Theory and Lab; Geospatial Analysis and its Applications Theory and Lab; Web GIS and Google Earth Engine; Computer-Aided Design & BIM; Fundamentals of Geoinformatics Theory and Lab; Advanced Elective Theory and Practical : Geoinformatics Applications in Urban and Regional Planning; Advanced Elective Theory and Practical : Geoinformatics Applications in Environment and Climate; Advanced Elective Theory and Practical : Geoinformatics Applications in Natural Resource Management)
- Developed and designed **B.Tech. in Civil Engineering in Maulana Abul Kalam University of Technology [formerly known as West Bengal University of Technology (WBUT)]** (specifically Surveying & Geomatics Theory and Lab; Engineering Geology Lab; Geographic Information Systems and Science; Energy Science and Engineering)
- Developed and designed **B.Tech. in Civil Engineering in Haldia Institute of Technology (an Autonomous Institute)** (specifically Surveying & Geomatics Theory and Lab; Engineering Geology Lab; GIS and Remote Sensing; Energy Science and Engineering)

## **PROFESSIONAL TRAINING:**

- Participated in Faculty Development Programme on “Values and Ethics in Profession” from 15<sup>th</sup> January to 21<sup>st</sup> January, 2024, organized by the Dept. of Management and Social Science and IQAC, Haldia Institute of Technology.

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- Participated in Orientation Course on “NEP 2020 Orientation & Sanitization Programme” from 18<sup>th</sup> December to 30<sup>th</sup> December, 2023, organized by Indian Institute of Technology (ISM, Dhanbad) and Malaviya Mission Teacher Training Programme.
- Participated in Faculty Development Programme on “Revised NAAC Framework” from 26<sup>th</sup> June to 30<sup>th</sup> June, 2023, organized by Adamas University.
- Participated in “Unnat Bharat Gram Arogya Series” under Unnat Bharat Abhiyan on 10<sup>th</sup> June, 2021
- Participated in the National Workshop on “Managing Self in the VUCA World (Volatile Uncertain Complex Ambiguous)”, organized by Department of Management and Social Science, Haldia Institute of Technology and Hindustan Unilever Limited from 22<sup>nd</sup> September to 29<sup>th</sup> September, 2019
- Participated in the One-Day Workshop on “ISRO Outreach Programme for Eastern Region”, organized by Regional Remote Sensing Centre – East and University of Calcutta on 27<sup>th</sup> April, 2018
- Participated in the *Faculty Development Programme on Engineering & Management* organized by Indian Centre for Advancement of Research & Education (ICARE), Haldia during 19<sup>th</sup> -21<sup>st</sup> January, 2018.
- Participated in the 3<sup>rd</sup> *International Conference on Mathematics and Computing (ICMC-2017)* organized by Haldia Institute of Technology, Haldia, West Bengal, India during 17<sup>th</sup> -21<sup>st</sup> January 2017.
- Participated in the *Faculty Development Programme on Planning, Teaching, Assessing, Creating, Exploring & Integrating* organized by Indian Centre for Advancement of Research & Education (ICARE), Haldia during 13<sup>th</sup> -15<sup>th</sup> January, 2017.
- Participated in the *Faculty Development Programme on Engineering, Research & Industry* organized by Indian Centre for Advancement of Research & Education (ICARE), Haldia during 14<sup>th</sup> -16<sup>th</sup> January, 2016.
- Participated in the *Faculty Development Programme on “Bridging Gap between Academia and Industry”*, organized by IIPC and TPO Cell, Haldia Institute of Technology from 5<sup>th</sup> – 11<sup>th</sup> February, 2015
- Participated in the *Faculty Development Programme on “Contemporary Engineering Practices (CEP-2015)”* organized by School of Engineering, Haldia Institute of

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Technology from 5<sup>th</sup> – 11<sup>th</sup> January, 2015.

- Participated in the Faculty Development Programme on “Intellectual Property Rights” held at Birla Institute of Technology, Mesra (Patna Campus) in 2013
- Participated in the Ten Months PG Diploma Course on “Geo-Information Science in Earth Observation” organized jointly by Indian Institute of Remote Sensing (ISRO), India and University of Twente (ITC), The Netherlands at IIRS, Dehradun from 2008 to 2009 as Govt. of India Sponsored faculty.
- Participated in the Two Weeks specialised Training Programme for faculty members of Colleges & Universities of Eastern Region from ISRO (Dept. of Space, Govt. of India) at Regional Remote Sensing Centre (RRSC), Kharagpur in 2005 on “Application of Remote Sensing in Natural Resource Management” as sponsored faculty from Syamaprasad College, University of Calcutta.

## **COMPUTER SKILLS:**

### **Remote Sensing and GIS Software:**

ArcGIS, Erdas Imagine, ILWIS, ENVI, PCI GEOMATICA, IDRISI, TNT MIPS, MapInfo, QGIS, NEST, SNAP.

### **Other Software and Programming Languages:**

Elementary knowledge on Python, C, C++, VB, VB.NET, MATLAB, MS OFFICE, SPSS, Statistica, Sigma Plot, Minitab, Corel Draw, Adobe Photoshop

## **PUBLICATIONS: (77)**

### **Peer Reviewed Journals: (30)**

1. METEY, T., SANTRA, A. & DAS, M. 2024. Assessing urban quality of life using geospatial technology – A case study of Kolkata Municipal Corporation, West Bengal,

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- India. *Indian Journal of Spatial Science*, 15(2), 8-14. (ISSN: 2249-3921) (EISSN: 2249-4316)
2. SANTRA, A., MITRA, S.S., ROUTH, S., KUMAR, A. & MITRA, D. 2024. Response of hybrid Markov models for urban growth simulation in Kolkata Metropolitan Area, India. *Journal of the Indian Society of Remote Sensing* (Under review)
  3. SANTRA MITRA, S., KUMAR, A., SANTRA, A. & ROUTH, S. 2023. Investigating impact of CORDEX-based predicted climatic and LCM-based LULC scenarios on hydrologic response of a semi-gauged Indian catchment. *Environmental Monitoring and Assessment*, 195, 450. DOI: 10.1007/s10661-022-10840-z (Springer) (ISSN: 1573-2959) (I.F. 3.0) (H-Index: 122) (url: <https://link.springer.com/article/10.1007/s10661-022-10840-z>)
  4. YADAV, N.K., MITRA, S.S., SANTRA, A. & SAMANTA, A.K. 2023. Understanding responses of atmospheric pollution and its variability to contradicting nexus of urbanization-industrial emission control in Haldia, an industrial city of West Bengal. *Journal of the Indian Society of Remote Sensing*, 51, 625-646. DOI: 10.1007/s12524-022-01649-x (Springer) (ISSN: 0974-3006) (I.F. 2.5) (H-Index: 44). (url: <https://link.springer.com/article/10.1007/s12524-022-01649-x>)
  5. SANTRA, A., KUMAR, A., MITRA, S.S. & MITRA, D. 2022. Identification of built-up areas based on the consistently high heat radiating surface in the Kolkata Metropolitan Area. *Journal of the Indian Society of Remote Sensing*, 50, 1547-1561. DOI: 10.1007/s12524-022-01543-6 (Springer) (ISSN: 0974-3006) (I.F. 2.5) (H-Index: 44). (url: <https://link.springer.com/article/10.1007/s12524-022-01543-6>)
  6. YADAV, N.K., SANTRA, A., SAMANTA, A.K., KUMAR, A., MITRA, S.S. & MITRA, D. 2021. Understanding the synergistic relation between land surface temperature and different biophysical parameters in Haldia industrial city of India. *Arabian Journal of Geosciences*, 14, 2412. DOI: 10.1007/s12517-021-08769-7 (Springer) (ISSN: 1866-7538) (I.F. 1.827) (H-Index: 58) (url: <https://link.springer.com/article/10.1007/s12517-021-08769-7>)
  7. SANTRA MITRA, S., SANTRA, A. & KUMAR, A. 2021. Catchment specific evaluation of Aphrodite's and TRMM derived gridded precipitation data products for predicting runoff in a semi gauged watershed of Tropical India. *Geocarto International*, 36(11),

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