

## Curriculum vitae

**Dr Guru Balamurugan**  
**Professor and Head**

Department of Geology, School of Earth Sciences  
Central University of Tamil Nadu, Thiruvavur-610005, Tamil Nadu, India  
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## **ACADEMIC QUALIFICATION**

Certificate Course 'Water Resource' (2016) - ITC, Twente University, Enschede, The Netherland  
PhD in Hydrogeology (Groundwater Modeling) (2008) - IIT Bombay, Mumbai, India  
MTech in Remote Sensing (2003) - CERS, Bharathidasan University, Trichy, India  
PG Diploma in Hydrogeology (2001) - Annamalai University, Annamalai Nagar, India  
M.Sc. in Applied Geology (1999) - National College, Bharathidasan University, India  
B.Sc. in Geology (1997) - National College, Bharathidasan University, India

## **PROFESSIONAL EXPERIENCES**

**(Research: 21 Years, Teaching: 16 years)**

**Dean: (May 2024 onwards) School of Earth Sciences, Central University of Tamil Nadu (CUTN)**

**Head of the Department: (August 2020 onwards) Geology, School of Earth Sciences, CUTN**

**Chairperson (May 2012 to June 2020), Centre for Geoinformatics, TISS, Mumbai**

**Professor: (June 2023 onwards), Department of Geology, School of Earth Sciences, Central University of Tamil Nadu (CUTN), Thiruvavur, Tamil Nadu-610005, India.**

**Associate Professor: (June 2020 – June 2023), Department of Geology, School of Earth Sciences, Central University of Tamil Nadu (CUTN), Thiruvavur, Tamil Nadu-610005, India.**

Founder Head of the Department and established basic and advanced research facilities in the department with the support of the Department of Geology faculty members. In the last three years organized various training programmes, seminars, and funded projects and supervised 4 Ph.D., scholars and 14 PG degree students in their research. During this period received an amount of INR ~1.5 million from various government agencies for research activities.

**Associate Professor (March 2017 to June 2020): Centre for Geoinformatics, Jamsetji Tata School of Disaster Management. The Centre for Geoinformatics made significant contributions toward curriculum & infrastructure development, teaching, research and extension activities. I have developed new courses for M.Sc, M.Phil, and PhD programs in school as well as for the institute. Establish the infrastructure facilities in the institute right from the base, including space and lab setup. As co-coordinator for UGC-DRS, Rs.6.6 million worth of financial support was brought to the school for necessary equipment facilities. In addition to administrative work, regular teaching, and guiding for M.Sc students, M.Phil and PhD scholars. Handled/handled several projects worth Rs. 4.2 million as PI and Co-PI supported by national and international agencies. As part of the extension activities, organized several Seminars, Workshops and training programs. The Centre for Geoinformatics lab was established in the institute, and apart from teaching, it carries out research in groundwater studies, disaster management plan and development, and other social sciences-related aspects.**

**Assistant Professor (August 2008 – March 2017), Centre for Geoinformatics, Jamsetji Tata School of Disaster Studies.**

**Research Fellow: (2003-2004) ISRO-sponsored research project entitled 'Integrated Remote Sensing and GIS study for Delineating Deep Aquifer system in Precambrian crystalline terrain South India (parts of Tamil Nadu, Karnataka).**

**Groundwater Consultant: (1999-2000) Conducted geophysical resistivity surveys for groundwater exploration.**

## **RESEARCH**

**Drone (UAV) Survey (2025-26):** Carried out the Unmanned Aerial Vehicle (UAV) based survey with very high-resolution aerial photograph to study the rejuvenation of water resources and surface water management in the Central University of Tamil Nadu, Thiruvavur, Tamil Nadu, India. Also, I am having the valid RPC – Remote Pilot Certificate (Drone Pilot License) from the Director General of Civil Aviation, Government of India.

**Study at ITC, The Netherlands** (2015-16): Study the Integrated Water Resource Assessments emphasizing Surface Water. As part of this study, the HBV, HECHMS model for surface water resources concerning drought and flood in both urban and rural areas of sub-basins of Teba Basin, Spain.

**PhD Research** (Dec' 2003-April' 2008): Topic on "Remote Sensing, GIS and Modeling for Characterizing the Fractured Aquifer System in Hosur Region, Tamil Nadu, India" at Department of Earth Sciences, IIT Bombay, India.

**DAAD Research Fellow** (2006-07): The German Academic Exchange Service (DAAD) awarded a fellowship to carry out the part of Doctoral Research in Germany on 'groundwater modelling in fractured aquifer system in Precambrian hard rock terrain was carried out at TU-Bergakademie, Freiberg, Germany. Finally, the water level in the fractured aquifer system was predicted using the model concerning the variation of pumping rate and rainfall.

**National Doctoral Fellow (AICTE-NDF)** (2004-08): All India Council for Technical Education (AICTE) awarded a fellowship to carry out doctoral research at the Department of Earth Sciences, IIT Bombay. The objective of the study is to identify the fractured and deep aquifers in hard rock terrains from high-resolution satellite data and a ground-based geophysical resistivity survey. The lineaments were identified from satellite imagery using conventional and image processing techniques. The geophysical resistivity survey is carried out along and across selected lineaments, and the pump test was carried out by observing chosen wells to get the aquifer characteristics like porosity, permeability, transmissivity, specific yield, and specific capacity and drawdown. Suitable groundwater potential and artificial recharge zones were identified from weightage and ranking-based integration analysis through ArcGIS software.

**M.Tech Research** (2002-2003): Topic on "Remote Sensing and GIS in Landslide Vulnerability Analysis Along Palani-Kodaikanal Ghat Raod, Tamil Nadu, India" at CERS, Bharathidasan University, Tiruchirapalli, Tamil Nadu, India

#### AWARDS AND OTHERS

- Received the RPC (Remote Pilot Certificate/Drone Pilot License) from the Directorate General of Civil Aviation (DGCA), Government of India - 2025
- IRO, TISS Grant, Studies at ITC, Enschede, The Netherlands - 2016
- Max Planck Institutes, Germany and TISS, India Research Grant (Urban aspiration studies) - 2013
- German Academic Exchange Program (DAAD) - 2007
- AICTE, NDF Scholarship (Pursuing PhD at IIT Bombay) - 2004
- TN State Council for Sci. & Tech. Grant for Student Research Project - 1999
- Qualified the UPSC Geologist - 2008.
- Qualified the SET - 2006.

#### AREA OF SPECIALIZATION

- Drone (Unmanned Aerial Vehicle (UAV)) – Land use and Land Cover, Hazards and Disaster, Geological and Earth Resources Mapping, and Critical Mineral Mapping
- Geospatial Technology in Groundwater Exploration, Modeling and Management
- Sustainable Development of Water Resources
- Climate change and impacts study
- Remote Sensing and GIS Applications in Disaster Management Plan
- Natural Disaster Mapping and Damage Assessment
- Geospatial technology in EWS, rapid assessment, response and rehabilitation
- Hyperspectral Remote Sensing for Mineral and planetary Studies

#### ADMINISTRATIVE & AND HONORARY POSITIONS

- ✓ Visitor's Nominee Executive Council (EC) (2026 onwards): Pondicherry University, Puducherry
- ✓ Expert: (2026 onwards) NCERT-NEP2020 for School Syllabus and Book Content, Government of India
- ✓ Court Member (December 2025 onwards): Central University of Tamil Nadu (CUTN), Tamil Nadu
- ✓ Dean: School of Earth Sciences (May 2024 to till date): Central University of Tamil Nadu, Thiruvarur
- ✓ Chief Warden (Boys Hostel) (September 2024 to till date): Central University of Tamil Nadu, Thiruvarur
- ✓ Head of the Department: Geology (August 2023 to till date): Central University of Tamil Nadu, Thiruvarur
- ✓ Head of the Department: Geology (August 2020 to July 2023): Central University of Tamil Nadu, Thiruvarur
- ✓ Academic Council Member (August 2020 to till date): Central University of Tamil Nadu, Thiruvarur
- ✓ Chairman - Board of Studies (August 2020 to till date): Department of Geology, CUTN, Thiruvarur

- ✓ Chairman - Board of Studies (May 2024 to till date): School of Earth Sciences, CUTN, Thiruvarur
- ✓ Selection Committee Member (2022 onwards): Faculty Recruitment, CUTN, Thiruvarur, Tamil Nadu
- ✓ Screening Committee Member (2022 onwards): Faculty Recruitment, CUTN, Thiruvarur, Tamil Nadu
- ✓ Selection Committee Member (2024 onwards): Faculty Recruitment, Pondicherry University, Puducherry
- ✓ Selection Committee Chairperson (2021 to 2023): Guest Faculty Recruitment, Geology, CUTN, Thiruvarur
- ✓ Screening Committee Chairperson (2021 to 2023): Guest Faculty Recruitment, Geology, CUTN, Thiruvarur
- ✓ Screening Committee Chairperson (2025 onwards): LDC, Central University of Tamil Nadu, Thiruvarur
- ✓ Member - Board of Studies (August 2020 to May 2025): School of Earth Sciences, CUTN, Thiruvarur
- ✓ Member - NAAC Steering Committee (2023-24), Central University of Tamil Nadu, Thiruvarur
- ✓ Member - NAAC Criteria-V (2023-24): Central University of Tamil Nadu, Thiruvarur
- ✓ Member - NAAC DVV (Assessment period 2016-2021): Central University of Tamil Nadu, Thiruvarur
- ✓ Member: Board of Studies, Sikkim University (2023-24 onwards)
- ✓ Member: School of Research Methodology, TISS, Mumbai (2015 to 2020)
- ✓ Member: Board of Studies in Somaiya College, Mumbai (2014 onwards)
- ✓ Member: Institute Academic Council, TISS, Mumbai (2013 – 2015)
- ✓ Member: Students Scholarship/Fellowship, TISS, Mumbai (2010 - 2011)
- ✓ Program Coordinator in Disaster Management, Jamsetji Tata School of Disaster Studies, TISS (2010 - 2015)
- ✓ Research Coordinator in Disaster Management, Jamsetji Tata School of Disaster Studies, TISS (2010 - 2012)
- ✓ Placement Coordinator in Disaster Management, Jamsetji Tata School of Disaster Studies, TISS (2010 - 2015)
- ✓ Coordinator for Admission Process, Jamsetji Tata School of Disaster Studies, TISS (2009 to 2020)
- ✓ Examiner for Doctoral Thesis evaluations in various Universities and Institutes
- ✓ Expert / Resource person in Remote sensing / GIS courses (2003 onwards)
- ✓ Expert / Resource person in various training/workshops (2003 onwards)

#### MEMBERSHIP IN A PROFESSIONAL SOCIETY

- Life Member: International Association of Hydrological Sciences (IAHS)
- Life Member: Indian Society of Remote Sensing (ISRS)
- Life Member: Indian Society of Geomatics (ISG)
- Founding & Life Member: Infectious Diseases Society of India (IDSI)
- Member: American Geophysical Union (AGU)

#### CONTRIBUTION TO PLAN AND POLICY

- UNISDR (The United Nations Office for Disaster Risk Reduction) – Global Assessment Report on DRR – 2013-14
- State Disaster Management Plan for the State of Jammu & Kashmir, and Ladakh – 2014-15
- Tribal Sub-Plan for the State of Maharashtra – 2015-16
- NRLM for the state of Chhattisgarh – 2014-15

#### GRANT RECEIVED FROM VARIOUS AGENCIES

| S.No | Agency  | Project Title   | Period                   | Amount/ PI/Co-PI  |
|------|---|---|--------------------------|---|
| 1    | NRDMS, DST, Govt. of India                      | 21days Training Programme on "Geospatial Technology" Emphasis on Basic Concepts and Applications."  | 2021-2022<br>(Completed) | <b>Rs. 10,00,000</b><br><b>Dr. Guru Balamurugan (PI)</b><br>Prof. Sulochana Shekhar (CoPI)            |
| 2    | US Department of State Federal Assistance Award | To develop a study course in Disaster Management and Mitigation at the Postgraduate level by forming a partnership between a US and Indian University | 2019-2020<br>(Completed) | <b>USD 39,999/-</b><br>Dr. Thomas O<br>Dr. Tim Frazier<br>Dr. Ramesh V<br><b>Dr. Guru Balamurugan</b> |
| 3    | NRDMS, DST, Govt. of India                      | 21days Training Programme on "Geospatial Technology" Emphasis on Basic Concepts and Applications."  | 2018-2020<br>(Completed) | <b>Rs. 10,00,000</b><br><b>Dr. Guru Balamurugan</b><br>Dr. V Ramesh                                   |
| 4    | NRDMS, DST, Govt. of India                      | 21days Training Programme on "Geospatial Technology" Emphasis on Planning and Policy Development."  | 2016-2017<br>(Completed) | <b>Rs. 10,00,000</b><br><b>Dr. Guru Balamurugan</b><br>Prof. S Anbazhagan<br>Dr. V Ramesh             |

|    |                                   |   |                            |   |
|----|-----------------------------------|---|----------------------------|---|
| 5  | ICSSR,<br>Govt. of India          | Smallholders in Peri-urban Agriculture:<br>To What Extent Do Inclusive Modern<br>Supply Chains Aid Their Survival?                              | (2015-2017)<br>(Completed) | <b>Rs. 28,00,000</b><br>PI: Sudha N, IGIDR, Mumbai<br><b>CoPI: Dr. Guru Balamurugan</b><br>CoPI: Elumalai K, JNU, Delhi |
| 6  | TISS, R&D                         | The study of the largest river Island of<br>Majuli: its erosion, morphological<br>changes, and environmental impact using<br>Geoinformatics     | (2015-2017)<br>(Completed) | <b>Rs. 3,00,000</b><br><b>PI: Dr. Guru Balamurugan</b>  |
| 7  | IDBI                              | Groundwater Exploration and<br>Management, Model village study, Leh   | (2012-2014)<br>(Completed) | <b>Rs. 7,00,000</b><br>PI: Prof. S. Parasuraman<br><b>Dr. Guru Balamurugan</b>  |
| 8  | Max Planck<br>Institutes and TISS | Study of periodical changes in physical<br>features and its impact on natural<br>resources in Mumbai (urban) using<br>Geoinformatics techniques | (2013-2015)<br>(Completed) | <b>Rs.3,00,000/-</b><br><b>PI: Dr. Guru Balamurugan</b>   |
| 9  | Tata Trust (JTCDM)                | Mapping Conflict Patterns using GIS<br>Applications   | (2010-2012)<br>(Completed) | <b>Rs. 7,00,000</b><br><b>PI: Dr. Guru Balamurugan</b><br>PI: Samrat Sinha  |
| 10 | Tata Trust (JTCDM)                | GIS Cell  | (2008-2012)<br>(Completed) | <b>Rs.25,00,000/-</b><br>PI: Prof. S. Parasuraman,<br><b>Dr. Guru Balamurugan</b>                                       |

#### Research and Publications: as of 19/Jan/2026

| Author ID                         | Category  | Web of Science | Scopus | Google Scholar |
|-----------------------------------|-----------|----------------|--------|----------------|
| Scopus: 49962838300 & 57191875875 | Citation  | 635            | 850    | 1265           |
| ResearcherID: A-5155-2019         | h-index   | 15             | 16     | 17             |
| Loop profile: 171915              | I10-index |                |        | 23             |
| Google Scholar: pGjFDG8AAAAJ      |           |                |        |                |
| ORCID: 0000-0003-4957-0576        |           |                |        |                |

#### RESEARCH GUIDANCE

##### Doctor of Philosophy (PhD.)

Completed : 06  
Ongoing : 03 (Mr Aarif S; Mr. Nasir, and Mr. Manimaran)

##### Doctoral Degree Awarded:

- Dr Hinotoli V Seema (2018):** Hazard, Vulnerability, and Risk Analysis in Landslide Prone Areas of Kohima Town, Nagaland Using Geospatial Technology. Centre for Geoinformatics, Jamsetji Tata School of Disaster Studies, Tata Institute of Social Sciences (TISS), Mumbai – 400088.
- Dr Francis Sangma (2020):** Analysis of Neo-Tectonic Signatures: Post-1950 Assam Earthquake in the Parts of Lower Subansiri Sub-Basin, Assam – Using Geospatial Technology. Centre for Geoinformatics, Jamsetji Tata School of Disaster Studies, Tata Institute of Social Sciences (TISS), Mumbai – 400088.
- Dr Somnath Bera (2021):** Integrated modelling for assessment of landslide hazard and community resilience: An application in changing built- environment, Kalimpong (Himalayas). Centre for Geoinformatics, Jamsetji Tata School of Disaster Studies, Tata Institute of Social Sciences (TISS), Mumbai – 400088.
- Dr Rahul R Hirwe (2021):** Study on Solar Energy Potential and Green House Gas Mitigation in India using Geospatial Technology. Tata Institute of Social Sciences (TISS), Mumbai – 400088.
- Dr Sachin Damle (2022):** Understanding Technological Accidents Initiated by Natural Hazards (Natech) and Development of its Risk Assessment Tool. Jamsetji Tata School of Disaster Studies, Tata Institute of Social Sciences (TISS), Mumbai – 400088.
- Dr Sujata Kodak (2024):** Spatial Planning and Urban Disaster Resilience: A Case study of Pune, Maharashtra, India. Jamsetji Tata School of Disaster Studies, Tata Institute of Social Sciences (TISS), Mumbai – 400088.

##### Doctoral Degree Ongoing:

- Mr Aarif S:** Extreme events and impacts on Horticulture, TISS, Mumbai
- Mr. Nasir A:** Flood Risk and Resiliences Assessment using ML and DL, Central University of Tamil Nadu, Thiruvavur
- Mr. P Manimaran:** Hyperspectral Remote Sensing for critical mineral mapping, Central University of Tamil Nadu

**Master of Philosophy (M.Phil) Completed : 06**

**M.Phil degree Awarded:**

1. **Mr Aarif Sultan, (2017).** Land use and land cover changes study in parts of Rural districts of Bengaluru using Geospatial Technology.
2. **Ms. Debasmitta Majumder, (2017).** Geomorphological study of the Glacial lake of Chorabari, Kedarnath using Geospatial technology.
3. **Ms Angana Mukherjee, (2016).** Understanding the process of Teri-Urbanization in the view of A State-LED Land Development Model in Rajarhat (New Town, Kolkata).
4. **Mr Somnath Bera, (2016).** Geospatial Approach for Landslide Susceptibility Modeling in Parts of Mahad Taluka, Raigad District, Maharashtra.
5. **Mr Himanshu Baswant, (2015).** Assessment of Meteorological and Hydrological Drought of Akola District of Maharashtra Using Geospatial Techniques.
6. **Ms Priya Topno, (2015).** Urban Growth in Mumbai City: A Study Focus on Vulnerability and Risk Aspects Using Geoinformatics.

**International Student Diplom:**

**Completed : 01**

**International Student Term Paper (IFRC-TISS international online Programme on Disaster Management):**

**Completed : 14**

**Master's Degree (MSc/MA)**

**Completed : 80**

**Ongoing : 03**

**Master Degree (MSc) Ongoing:**

1. Rahul VR (P242817) – Rare Earth Elements (REE) Mapping using Hyperspectral Images with Machine Learning (ML) and Deep Learning (DL) Techniques
2. Rohith S (P242819) – Exploring Potential Martian Analogues in Southern India
3. Mr. Deva T (P242810) – Comparative Landslide study of Thiruvannamalai and Valparai Regions using Geospatial Technology

**Master Degree (MSc/MA) Awarded:**

1. **Mr. Jnansunder V L (P232806) (2025)** – Application of UAV and High-spatial resolution satellite imagery in the micro-level management of surface water resources: A case study of CUTN campus.
2. **Ms. Ramjan Arifa S (P232813) (2025).** Geological Insights into the Von Kármán Crater on the Moon: Lithological, Compositional, and Chronological Studies using M3 and LROC – WAC Data.
3. **MS. Sinyele Kent (P232816) (2025).** Analysis of Mineralogy, Lithology and Crater Chronology of Aitken Crater using M3 Data, Chandrayaan-1.
4. **Mr. Veeramma Bhupathi (P232820) (2025).** Delineation of Groundwater Potential Zones using RS, GIS and AHP Techniques in Hard Rock Terrain of Chandur, Munugode Tahsils, Nalgonda District, Telangana
5. **Mr. Athul KP (P222803) (2024)** – Multi Decadal Scale Changes in the Oxygen Deficient Zone in the West-Central Bay of Bengal during the last ~482 yrs BP.
6. **Mr. Harimohan Sonowal (P222806) (2024)** – Crustal Structure and Tectonic Evolution of the Cauvery Basin, Eastern Continental Margin of India: A Geophysical Revisit.
7. **Ms. Hisole Magh (P222807) (2024)** – Spectral Characterization of Chert and Associated Rocks Occurrences of Naga Hills Ophillite Complex and its Astro Biological Implications.
8. **Mr. Kotsho Wetsah (P222808) (2024)** – Spectral Characterization of Serpentinite Occurrences of Naga Hills Ophillite Complex and its Astro Biological Implications.
9. **Ms. Pranjal Das (P222815) (2024)** – Assessment of Groundwater Quality and Hydrogeochemical Studies in the Burhabalang River Area of Baleshwar District, Odisha.
10. **Mr. Subhasmit Dash (P222817) (2024)** – Hydrocarbon Source-Rock Characterisation and Kerogen Decomposition Kinetics of Permian Coals from Mahanadi Basin, Tacher, Odisha.
11. **Mr Vikram T (2023)** - Pixel-Based Study of the Urban Heat Island (UHI) Using Geoinformatics, AI and ML in the part of Puducherry and Cuddalore regions.
12. **Mr Inwate Prabhudas Govind (2023)** - Suitable site selection for artificial recharge structure in CUTN campus, Thiruvapur, Tamil Nadu, India using Geospatial Technology.

13. **Mr Sachin Kumar (2023)** - Identification of artificial recharge sites for Chennai basin using ArcGIS and Remote Sensing.
14. **Ms Pranalima Pujari (2023)** – Exploring the future prospect of the Fry method of strain analysis.
15. **Mr Umasankar Sahoo (2023)** – Assessment of groundwater quality and hydrogeochemical studies in the Mahakalpara area of Kendrapara district, Odisha.
16. **Mr Bhukya Vamshi Krishna (2023)** – Assessment of groundwater quality around Kothagudem watershed, Eastern Telangana, India.
17. **Mr Devashish Murmu (2022)** – Identification of Artificial Recharge Sites for Groundwater Development in Perambalur District, Tamil Nadu.
18. **Mr Harikrishnan S (2022)** – Groundwater Quality Mapping and its Impacts in Thiruvarur District, Tamil Nadu.
19. **MS. Mydhili SB (2022)** – Groundwater Potential Mapping and Sustainable Development in Villupuram District, Tamil Nadu.
20. **Mr Nivas R (2022)** – Morphological Changes in the Mid-Coast of Tamil Nadu Using Time-Series Remote Sensing Data, Tamil Nadu.
21. **Ms Aastha Agarwal (2020)** - Climate Change, Rainfall Variations, Extreme events and Impact on Agriculture.
22. **Ms Chaynika Pasari (2020)** - Comparative Assessment of Drought in Irrigated and Non-Irrigated Agricultural Land in Sambalpur District: Groundwater, Precipitation and Sustainability of Current Agrarian Practices.
23. **Mr Gopal Barik (2020)** - Shoreline change analysis and forecast using Digital Shoreline Analysis System(DSAS) 5.0: A case of parts of the east coast of India.
24. **Mr Prakhar Bisht (2020)** - Groundwater Sustainability in Coastal Region through Artificial Recharge Structures and its impact on Water Resources and Agriculture using Geospatial Technologies.
25. **Mr Rohit Rajput (2020)** - Impact of Landfill Sites on the environment, potential risks and vulnerability imposed in the vicinity: A geospatial technology-based study on the smart city of Delhi.
26. **Ms Sanchari Ghosh (2020)** - Assessment of Coping Capacities and Mitigation Strategies in Recurring Landslide zones of Kurseong, Darjeeling.
27. **Ms Suranjana Mullick (2020)** - A decadal study of Cyclone Recovery through Physical and Community Resilience for Cyclone Aila and Bulbul 2019 in parts of Sundarbans, India.
28. **Mr Abhay Vashisht (2019)** - Retreating Glaciers in Kibber, Lahaul and Spiti District, Himachal Pradesh, India and Its Effect on the Agrarian Community.
29. **Ms Lakshmi S (2019)** - Urban Heat Island Mapping of Puducherry City using Geospatial Technology.
30. **Ms Priyanka Priyadarshini (2019)** - Flood Risk Mapping in parts of Bhubaneswar City using Geospatial techniques.
31. **Ms Salew Lohra (2019)** - Environmental impact analysis and sustainability in parts of Mao-Maram region, Senapati district, Manipur.
32. **Ms Vaishnavi Kapoor (2019)** Groundwater recharge and its impacts on the community: A case study on Naganadhi River basin.
33. **Mr Vijendra B. Sambhalwar (2019)** - Tropical Cyclone Heat Potential (TCHP) and Case Studies of Cyclone Gaja, Ockhi and Vardah.
34. **Ms Ann Martin (2020)** - Surface water dynamics of the 100th year flood and the socio-economic impact assessment of the affected farmers in Kerala.
35. **Mr Hareesh N A (2018)** – Analysis of real-time disaster data on social media (Twitter): Sri Lankan Floods and Cyclone Ockhi.
36. **Mr Sayantan Roy (2018)** – Groundwater poisoning and fluoride contamination affecting the public health of Rampurhat Sub-Division: A GIS approach.
37. **Mr Bharat Rao (2017)** - Identification of Probabilistic Oil Spill Area and Risk Mapping of Coastal Area of Mumbai using Geo-Informatics.
38. **Ms Lisa Teotia (2017)** - Mapping of Wetlands in Coastal Regulation Zone (CRZ) of Mumbai Island.
39. **Mr Praveen Krishna Bonu (2017)** - Identification and Mapping of Emergency Evacuation Routes during Cyclone and Tsunami for the City of Visakhapatnam using Geospatial Analysis.
40. **Mr Rishabh Maheshwari (2017)** - Drought study of Jaipur District and its impacts on Agricultural using Geospatial Technology.
41. **Ms Agnes Liji George (2017)** - Land use and land cover changes study in parts of Ramanagara Districts using Geospatial Technology.
42. **Ms Ankita Padalni (2016)** – Risk Assessment of Seismic Vulnerability of Building in Kathgodam City.

43. **Ms Disha Dwivedi (2016)** – River course changes and risk analysis of River Ganga, Allahabad using Geoinformatics Techniques.
44. **Mr Sumit Kumar Shahi (2016)** – Agricultural Damages due to Drought and its Analysis in parts of District Patna, Using GIS Techniques.
45. **Mr Swapnil Malusare (2016)** – Automatic detection of Damaged Physical features in a Disaster-Affected area using DIP.
46. **Mr Yuvraj Singh Rajput (2016)** – Plan to Develop an Emergency Operation Centre (EOC) using Geoinformatics: A case study of Gwalior, Madhya Pradesh.
47. **Mr Prathamesh (2015)** – Study of Post-Earthquake Impacts on Environment In the North District of Sikkim Using Geoinformatics Techniques.
48. **MMsRiya Saha (2015)** – Study of Agricultural Losses Due to Flood Through Remote Sensing and GIS in Bharatpur-1 Block at Murshidabad District, West Bengal.
49. **Mr Shabaz Khan (2015)** – A Study on Shifting in river course and its effects on the agricultural area of floodplain of Teesta River in Jalpaiguri district, West Bengal by using GIS and Remote Sensing Techniques.
50. **Mr Surendra Ram (2015)** – The Study of Meteorological Drought and its impact on Agriculture using Remote Sensing and GIS Techniques.
51. **Ms Vinita Kumari (2015)** – Groundwater Assessment of Bhuigaon village in Vasai Taluka of Thane District, Maharashtra using GIS Techniques.
52. **Mr Yash Yadav (2015)** – Hazard Assessment of Surat Floods – 2006 and 2013 using GIS and Remote Sensing.
53. **Ms Archana R B (2014)** – Development of Mangroves in Intertidal Zone of Mundra Coast, Gujarat, Geoinformatics, - Suitable Species Selection, - Community Participation.
54. **Ms Gayathri C (2014)** – Urban Environmental change analysis and Flood risk mapping of Mumbai 'N' Ward using Geo-informatics.
55. **Mr Mohd Suhail Shaikh (2014)** – Landslide Hazard Susceptibility Mapping in Parts of Mumbai Using Geoinformatics Techniques.
56. **Ms Muslonkar Neha Subhash Vardha (2014)** – Landuse and Landcover Change Detection Analysis along the CRZ of Ganjam District, Odisha.
57. **Mr Pranav Sethi (2014)** – Land use and land cover changes and its impact on groundwater resources in Gurgaon, Haryana using Geo-informatics techniques.
58. **Mr Sagat Shaunik (2014)** – Exploring Asbestos Related Health Problems and Its Socio-Economic Impact Using Remote Sensing and GIS Mapping in Roro Hill area, Jharkhand.
59. **Mr Sethu Deepak (2014)** – Geo-Informatics Based Urban Flood Inundation Model: A Study On Physical And Demographic Impacts of Floods In Parts of Mumbai.
60. **Mr Vijay Ganesh (2014)** – Suitability of Early Warning Systems in Landslide-Prone Areas of Mumbai Using Geo-Informatics: Case Study of Bhandup Area.
61. **Ms Apporva Jain (2013)** – Flood Hazard Zonation and Vulnerability Mapping in Runi Saidpur Block, Sitamarhi District, Bihar Using Geo-Informatics.
62. **Mr Aravind M S (2013)** – Application of Geoinformatics in Land Use Land Cover Change Detection Analysis in Mundra Coast, Gujarat.
63. **Mr Karthik Seshan (2013)** – Groundwater Potential Mapping and Artificial Recharge Using Geo-Informatics Leh Valley, Ladakh, India.
64. **Ms Priyanka Chowdhary (2013)** - Landslide Susceptibility Zonation Mapping Using Geoinformatics in Gangtok, Sikkim.
65. **Mr Rajeev Ningthoujam (2013)** – Study of Land Use and Land Cover Changes with Special Emphasis on Forest Cover and Landslide Hazard Zonation Mapping Using Geo-Informatics Techniques in Gopibung Area, Senapati District, Manipur.
66. **Mr Ranjit Kumar Ray (2013)** – The Landslide Hazard Analysis of Guwahati Region Using Remote Sensing & GIS Application.
67. **Mr Shakti Sagar Sadashiv Dhole (2013)** – Geoinformatics Application in Hydrological Drought in Parts of Khatav Taluka of Satara District in Maharashtra State.
68. **Mr Arhat Wakode (2012)** – Application of Remote Sensing and GIS in Landslide Hazard Zonation Mapping – A Case Study of Kalimpong, West Bengal.
69. **Mr Himanshu Baswant (2012)** – Physical Damage Assessment of Flash Flood in affected areas of Phyang and Ego village, Leh-Ladakh using Geo-Informatics.

70. **Mr Abhishek Wadekar (2012)** - Mapping the prevalence of Kidney diseases in parts of Canacona Taluka, Goa: A GIS analysis.
71. **Ms Aahna Srikanth (2011)** – Mapping Road Traffic Crashes Using GIS – A Case Study of Navi Mumbai.
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73. **Mr Anil Kumar (2011)** – Mangrove Destruction and its Impact on Fishing Community of Mumbai – Remote Sensing and GIS Approach.
74. **Mr Ankit Jaiswal (2011)** - Mapping of different types of conflict-related incidents in Manipur using GIS techniques.
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79. **Mr Ranit Chatterjee (2010)** - Landslide Hazard Zonation Mapping and Remedial Measures for Prevention – A Case Study of Kalimpong, Darjeeling.
80. **Ms Sneha Krishnan (2010)** – Flood Risk Mapping in Kalyan-Dombivli Region, Mumbai Using Remote Sensing and GIS Techniques.

#### COUNTRIES VISITED

- The Netherlands (2015-16) – ITC Netherland Visit, Institute Fellowship
- Germany (2006-07) – During DAAD Fellowship

#### PUBLICATIONS

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##### Book

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2. Hareesh, N.A., **Guru, Balamurugan.**, (2025). Social Media: Potential Communication Tool During Disaster Response—Cyclone Ockhi and Sri Lankan Floods Using AI and ML. In: Talukdar, S., Chatterjee, R., Bera, S., Prashar, A., Shaw, R. (eds) Communication, Science, Technology, and Innovation in Disaster Risk Management. GIScience and Geo-environmental Modelling. Springer, Cham. [https://doi.org/10.1007/978-3-031-77189-7\\_7](https://doi.org/10.1007/978-3-031-77189-7_7)

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1. **Balamurugan Guru (2025)**. Remote Sensing and GIS Applications - Geological Mapping. Workshop on Trends and Opportunities in Geological Remote Sensing, 14<sup>th</sup> February 2025 at the Centre for Applied Geology, Gandhigram Rural Institute, Dindigul, Tamil Nadu.
2. **Balamurugan Guru (2025)**. Remote Sensing and GIS Applications – Groundwater Management and Modelling. Workshop on Trends and Opportunities in Geological Remote Sensing, 14<sup>th</sup> February 2025 at the Centre for Applied Geology, Gandhigram Rural Institute, Dindigul, Tamil Nadu.
3. Swapnil S Malusare and **Balamurugan Guru** (2019). Automatic detection of physically damaged in Disaster-Affected Areas. The World Symposium on Artificial Intelligence, Governance, and Disaster Management, 11<sup>th</sup>-13<sup>th</sup> March 2019. Special Centre for Disaster Research at JNU. Delhi

4. **Balamurugan Guru** and Pranav Sethi (2018). Urban Growth and its Impact on Groundwater Resources in Gurugram Block, Using Geospatial Technology. International Conference on Impact of Climate Change on Water Resources. 12<sup>th</sup> – 13<sup>th</sup> July 2019 at Periyar University, Salem, India
5. **Balamurugan Guru** and Ankita Padhalni (2018). Vulnerability and Risk Analysis in the Seismic Zone V using Geospatial Technology – A case study of Kathgodam Town, Uttarakhand, India. International Conference on "Reinforcing Institutional Decision Making in Disaster Preparedness and Mitigation" 16<sup>th</sup> - 18<sup>th</sup> Feb 2018. Special Centre for Disaster Research at JNU. Delhi
6. **Guru Balamurugan** (2017). Socio-Economic Impact Assessment in Kumudvathi River Basin, Karnataka. International Conference on Innovative Methodologies in Rejuvenating Rivers & its Socio-Economic Impacts. 5<sup>th</sup> - 6<sup>th</sup> December 2017. Organized By Vyakti Vikas Kendra India (VVKI) & International Association of Human Values (IAHV), Bengaluru, India.
7. **Guru Balamurugan**, Ramesh V, and Pradheeps M (2017). Application of Geospatial Technology in Statelessness. Conference on Statelessness and Citizenship on 29<sup>th</sup> – 30<sup>th</sup> November 2017 organized by Tata Institute of Social Sciences, Mumbai.
8. Somnath Bera and **Balamurugan Guru** (2017). A probabilistic approach for spatial prediction of landslide susceptibility zones of Mahad Taluka, Western Ghats, India. National Conference on Geoinformatics for Natural Resource Management 7<sup>th</sup> – 8<sup>th</sup> February 2017. Jamia Millia Islamia, New Delhi, India
9. A. Srikanth, **B. Guru** (2011): (A16) *Using Geographical Information Systems in Road Traffic Injury Research: A Case Study of New Mumbai, India*. 17th World Congress on Disaster and Emergency Medicine. 06/2011; 26(S1). DOI:10.1017/S1049023X1100029X.
10. Y. Tanwar, V. Kaushik, N. Roy, S. Sinha, **B. Guru** (2011): (A212) *The 2008 Mumbai Terrorist Attacks and the Changing Pattern of Violent Injuries*. 17th World Congress on Disaster and Emergency Medicine. 04/2011; 26. DOI:10.1017/S1049023X11002020.
11. Sneha Krishnan, **Guru Balamurugan** (2010): Flood Risk Mapping with Special Reference to Demographic and Physical Vulnerability Indicators, Parts of Mumbai, India. National Conference on 'Geomatics in Disaster Management, TISS, Mumbai, India; 9<sup>th</sup> -10<sup>th</sup> April 2010.
12. Biswal T K, **Balamurugan Guru**, Tanushree Mahadani, Singh YK, Vinee Srivastava (2010): Tectonic activities related to landslide studies. National Conference on 'Geomatics in Disaster Management, TISS, Mumbai, India; 9<sup>th</sup> -10<sup>th</sup> April 2010.
13. **Balamurugan Guru**, Vikas N Kurne (2010): Application of GIS in Post Flood Epidemics – A case study, Mumbai. Spatial Dimensions on Health Care - Use of GIS in Health Studies, Mumbai, India; 9<sup>th</sup> Sep 2010.
14. **Guru Balamurugan**., Biswal, T.K., and Anbazhagan, S. (2008). Remote sensing-based interpretation of lineaments around Hosur area, South India, and its tectonic significance. International Conference on Tectonics of the Indian Subcontinent (TOIS), IIT Bombay, Mumbai 3<sup>rd</sup> - 6<sup>th</sup> March 2008 pp178.

#### Published in Magazines

1. Hinotoli V Sema and **Balamurugan Guru** (2017). Vulnerability and Risk Analysis of Female Population in Landslide Affected Areas of Kohima Town, Nagaland. GIS Resources (4): 14-16

#### Development Plan Reports

1. **Expert Member** - The planning and development process of the State Disaster Management Plan. Submitted to Government of Jammu and Kashmir (approved by Government in July 2015).
2. **Expert member** - The planning and development process of Tribal Sub-Plan (TSP). Submitted to State Government of Maharashtra (approved by Government in December 2015).
3. **Expert member** - The development of People-Centred Early Warning Systems and Disaster Risk Reduction - A Scoping Study of Public Participatory Geographical Information Systems (PPGIS) in India. Global Assessment Report on Disaster Risk Reduction 2015
4. **Expert member** - The planning and development process of the National Livelihood Mission of Chhattisgarh State (approved by Government 2014)
5. **Expert member** - The Workshop on "Northern Indian Ocean, under the auspices of the United Nations, in support of the Assist the Regular Process for Global Reporting and Assessment of the State of the Marine

Environment, including Socio-economic Aspects" at Earth System Sciences Organisation, held from 27th-28th January 2014 at ESSO-NIOT (MoES, Govt. of India), Chennai".

6. **Balamurugan Guru** (June. 2013): Geo-Informatics in Disaster Response and EOC Operations. Emergency Operating System, State level Disaster Management Plan (SDMA), Government of Jammu and Kashmir, India, Srinagar; 06/2013

#### **Disaster Response/Reports**

1. Post Disaster field response and prepared the *Sikkim Earthquake report (2011)*.
2. Post Disaster field response and prepared the *Thane Cyclone report (2012)*.
3. Post Disaster field response and prepared the *Uttarakhand Flood report (2013)*.
4. Post Disaster field response and prepared the *Phailin Cyclone report (2014)*.
5. Post Disaster field response to the *Chennai and Cuddalore Flood (2015)*.

#### **CONFERENCE / TRAINING / WORKSHOP ORGANIZED**

##### **Conference Organized**

1. Convenor - National Conference on 'Geomatics in Disaster Management (GeoDM2010)' at Jamsetji Tata Centre for Disaster Management (JTCDM), TISS, Mumbai on 9<sup>th</sup> – 10<sup>th</sup> April, 2010. These two days conference participants from different parts of India from reputed Government Organisations, Institutes, Colleges, IT Sectors and NGOs.

##### **Training / Workshop Organized**

1. Convener – 1 Day Workshop on Advanced Microscopic Techniques on 8<sup>th</sup> May 2023 jointly organised by the Department of Geology and InBiotex sponsored by Central University of Tamil Nadu. Central University of Tamil Nadu, Thiruvarur, Tamil Nadu, India.
2. Member – 1-Day National Level Pre-Event Workshop on Disaster Research and Knowledge Management on 25<sup>th</sup> February 2023 Hybrid Mode organised by Centre for Disaster Management, Central University of Tamil Nadu. Sponsored by NIDM, Government of India.
3. Convener - 2 Day National Seminar on "Climate Change Impacts..... for University/College Faculty Members from 8<sup>th</sup> November to 9<sup>th</sup> November 2022 sponsored by UGC-STRIDE Component-1, Government of India. Central University of Tamil Nadu, Thiruvarur, Tamil Nadu, India.
4. Coordinator - 21 Day Summer/Winter School on Geospatial Technology & Its Applications (GeoTiA-2022)" from 21<sup>st</sup> November to 11<sup>th</sup> December 2022 Sponsored by NRDMS-DST (Govt. of India). Central University of Tamil Nadu, Thiruvarur, Tamil Nadu, India.
5. Member of National Conference Committee on "Climate Change 2022" from 20<sup>th</sup> July 20 to 21<sup>st</sup> July 2022, Sponsored by UGC-STRIDE, Component-1, Government of India. Central University of Tamil Nadu, Thiruvarur, Tamil Nadu, India.
6. Coordinator - 21 Day Summer/Winter School on Geospatial Technology & Its Applications (GeoTiA-2019)" from 3<sup>rd</sup> December to 23<sup>rd</sup> December 2019 Sponsored by NRDMS-DST (Govt. of India).
7. Coordinator - 21 Day Summer/Winter School on Geospatial Technology & Its Applications (GeoTiA-2017)" from 20<sup>th</sup> March to 9<sup>th</sup> April 2017 Sponsored by NRDMS-DST (Govt. of India).
8. Convenor – 2-Week training programme on "Basic and Advanced Course on GIS Skill Development & Training" at the TISS, Deonar, Mumbai from 23<sup>rd</sup> June to 4<sup>th</sup> July 2014.
9. Convenor - 2-Week training programme on "Basic and Advanced Training on Geoinformatics for Architects and Civil Engineers" TISS, Deonar, Mumbai from 24<sup>th</sup> November to 5<sup>th</sup> December 2014.
10. Convenor – 1-Week National Training Program on 'GIS Applications in Public Health Mapping (GISPM)' at Jamsetji Tata Centre for Disaster Management (JTCDM), TISS, Mumbai from 27<sup>th</sup> September to 1<sup>st</sup> October 2010.
11. Convenor - 3 day workshops on "GIS application and emphasis on Rural Development" from 12<sup>th</sup> to 14<sup>th</sup> September 2013, TISS, Hyderabad.
12. Convenor - 2 day workshop on "GIS applications and emphasis on Livelihood and Resource Mapping" from 27<sup>th</sup> and 28<sup>th</sup> December 2013, TISS, Mumbai.

13. Coordinator - EDUSAT, launched by Geosynchronous Satellite Launch Vehicle (GSLV-F01) in September 2004, is India's first thematic satellite dedicated exclusively to educational services. The spacecraft is specially configured to relay through an audio-visual medium, employing a multi-media multi-centric system, to create interactive classrooms.

#### INTERNATIONAL JOURNAL REVIEWER

- **Review Editor: Frontiers in Earth Sciences** (<https://loop.frontiersin.org/people/171915/overview>)
- Applied Geography (Springer)
- Applied Water Science (Springer)
- Bulletin of Engineering Geology and the Environment (Springer)
- Environment, Development and Sustainability (Springer)
- The Egyptian Journal of Remote Sensing and Space Sciences (Elsevier)
- Frontiers in Earth Sciences
- Geocarto International (Springer)
- Geological Society of India (Springer)
- Himalayan Geology (Wadia Institute of Himalayan Geology)
- Indian Journal of Social Work (TISS)
- Indian Society of Remote Sensing (Springer)
- International Journal of Disaster Risk Reduction (Elsevier)
- International Journal of Earth Sciences and Engineering (CAFFET-INNOVO)
- International Journal of Remote Sensing (Taylor & Francis)
- Journal of Hydrogeology (Springer)
- Remote Sensing (MDPI)
- Spatial Information Research (Springer)
- Springer Plus (Springer Open - Online publication)
- Stochastic Environmental Research and Risk Assessment (Springer)
- The Egyptian Journal of Remote Sensing and Space Sciences (Elsevier)
- The Journal of Indian Geophysical Union (Indian Geophysical Union)
- Water Resources Management (Springer)

#### TEACHING AND CURRICULUM DEVELOPMENT

- Developed the PhD curriculum, the Department of Geology, School of Earth Sciences, CUTN (2022)
- Updated the existing curriculum of M.Sc. in Geology, Department of Geology, School of Earth Sciences as per the UGC guidelines Objective Based Education (OBE) in 2020-2021.
  - Teaching courses at the Central University of Tamil Nadu (CUTN)
  - Ph.D., Geology
    - Geospatial Technology and Modelling in Groundwater Resources
    - Hyperspectral Remote Sensing and Geological Exploration
    - Research and Publication Ethics
    - Research Methodology (*Sharing with other faculty members*)
  - M.Sc., Applied Geology
    - Hydrogeology and Sustainable Development (Theory)
    - Hydrogeology (Practical)
    - Remote Sensing and GIS (Theory)
    - Remote Sensing and GIS (Practical)
    - Geostatistics and Computer Applications in Geosciences (Theory)
    - Disaster Management (*Sharing with other faculty members*)
    - Earth System and Sciences-II (*Sharing with other faculty members*)
    - Physical Geology and Geomorphology (*Sharing with other faculty members*)
- Programme Coordinator for M.Sc in Disaster Management program at JTCDM, TISS (2009 to 2015) and look after overall academic activities including course registration, timetable preparation and allotment of project work.
  - M.Phil/Ph.D. Courses
  - IFRC and TISS Online Course (One Course: 2013-2020)

- Geoinformatics & Information Communication Technologies in Disasters
  - PG degree in Disaster Management
  - PG degree in Habitat Studies
  - PG degree in Ecology, Environment and Sustainable Development
- As Chairperson of the Centre and Programme coordinator, the curriculum is developed for the following courses and introduced in the Institute as an individual as well as a team
  - Individual:
    - MPhil/Ph.D. Optional courses
    - Applications of Geoinformatics in Water Governance and Policy
  - Team:
    - MPhil/Ph.D. in Disaster Management

#### Workshop/Seminar/Conference/Training Programmes Attended

1. National Educational Policy (NEP-2020), Central University of Tamil Nadu, Thiruvavur, 27<sup>th</sup> and 28<sup>th</sup> of May 2022.
2. IEEE Workshop on Distributed Systems for Coordinated Disaster Management, IIM Calcutta, India January 2nd - 3rd, 2016.
3. Technical Commission VIII Mid Term Symposium Pre-Tutorials NRSC, ISRO, Hyderabad Dec. 6, 2014, March 8, 2015, National Remote Sensing Centre (NRSC), Hyderabad
4. Global Positioning System (GPS) at National Atlas and Thematic Mapping Organization (NATMO), Department of Science and Technology, Kolkata, 4<sup>th</sup> - 8<sup>th</sup> July 2011.
5. Structural and geological mapping is carried out in and around the Ambaji area, Rajasthan and Gujarat.
6. Training program on "Incident and Emergency Management" at LBS, National Academy of Administration, Mussoorie. 31<sup>st</sup> May - 4<sup>th</sup> June'2010.
7. Training/Tutorial on "Microwave Signature" at Space Application Centre (SAC), Ahmedabad. Dec-2008.
8. Attended the training on "Emerging trends in remote sensing: imaging spectroscopy and natural resource mapping" at the Department of Earth Sciences, IIT Bombay, 8<sup>th</sup> – 12<sup>th</sup> Dec'2008.
9. Attended the training on "The statistical analysis of compositional data" by Int. Assoc. for Mathematical Geology (IAMG) at TU-Bergakademie, Freiberg, Germany, June' 2007.
10. Participated in the Association of Petroleum Geologists (APG) 3rd Workshop and Expedition in Spiti Valley, Manali, and Kaza, H.P, India. 22<sup>nd</sup> - 28<sup>th</sup> July 2006.
11. Participated in the Quality Improve Programme (QIP) "Geographic Information Systems and Its Applications", IIT Bombay, Mumbai – 400076. 14<sup>th</sup> – 18<sup>th</sup> February 2005.
12. Participated in the DST training program on Mathematical Modelling of Groundwater Flow and Mass Transport through Theory and Hand on Training at, Jawaharlal Nehru University, New Delhi, India (12<sup>th</sup> Nov-9<sup>th</sup> Dec 2004).
13. Participated in the ERDAS training program on ERDAS Imagine Professional, Vector & Virtual GIS (10<sup>th</sup> – 14<sup>th</sup> January 2005).
14. ESRI training program on ArcGIS 9.0 at IIT Bombay, Mumbai, India (August 2004 and October 2004).

#### Keynote Speaker/Invited Lecture/Resource Person/Panelist/Chairing the Sessions

1. **Chairperson:** Emerging Multi-disciplinary Research Trends and Advanced Methodologies for Viksit Bharat 2047 theme on Environmental & Sustainability Studies on 28/02/2026 (from 28/02/2026 to 01/03/2026) in the CONVERGENCE 2026, jointly organized by National Institute of Technology (NIT) - Tiruchirappalli, and SHoDH at NIT Tiruchirappalli, Tamil Nadu, India
2. **Keynote Speaker:** Research Methodology for Emerging Multi-Disciplinary & Frontier Areas on 28/02/2026 (from 28/02/2026 to 01/03/2026) in the CONVERGENCE 2026, jointly organized by National Institute of Technology (NIT) - Tiruchirappalli, and SHoDH at NIT Tiruchirappalli, Tamil Nadu, India
3. **Keynote Speaker:** Climate Change and its Impacts on Water Resources and Agriculture - A Case Study on 11/12/2025 (from 9<sup>th</sup> to 11<sup>th</sup> December 2025) in the International Conference on "CROPS- Climate Resilience Optimization for Productivity and Sustainability (CROPS 2025)" by the Mohan Babu University, Tirupati, Kotala, Andhra Pradesh, India

4. **Keynote Speaker:** Hydro geochemical evolution of ground water along flow paths: mechanism and influencing factors on 10/12/2025 (from 8<sup>th</sup> to 12<sup>th</sup> December 2025) by the Geological Survey of India Training Institute (GSITI), Hyderabad, is conducting the Orientation Course for newly appointed Geologists and Chemists selected through the UPSC Combined Geo-Scientist Examination-2024, Hyderabad, India
5. **Keynote Speaker:** Hydro geochemistry of Geothermal Spring water: sources, interactions and indicators on 10/12/2025 (from 8<sup>th</sup> to 12<sup>th</sup> December 2025) by the Geological Survey of India Training Institute (GSITI), Hyderabad, is conducting the Orientation Course for newly appointed Geologists and Chemists selected through the UPSC Combined Geo-Scientist Examination-2024, Hyderabad, India
6. **Resource Person:** Geospatial Technology – Disaster RESILIENCE on National Training Programme on 10/10/2025 (from 9<sup>th</sup> & 10<sup>th</sup> October 2025) “Geospatial Thinking 2025” by the Department of Remote Sensing, Bharathidasan University, Thiruchirappalli, Tamil Nadu, India
7. **Keynote Speaker:** Introduction to Survey: UAV on 06/10/2025 (from 06<sup>th</sup> to 10<sup>th</sup> October 2025) in the National Training on “Survey 2025” by the Department of Geography, School of Earth Sciences, Central University of Tamil Nadu, Thiruvavur, Tamil Nadu, India
8. **Keynote Speaker:** Opportunities for Teachers and Scholars: International and National Level Fellowships on 06/09/2025 in the Kalvialargal Sangamam (Educationalist Conference) on Teachers Day & Prof. Yashwantrao Kelkar’s 100<sup>th</sup> Year Celebration at Karaikudi Tamil Nadu, India
9. **Resource Person:** Geo-Hydrological factors and wetland retention in promoting climate-smart farming on 14/06/2025 (from 14 June to 15 June 2025) in the Seminar on Adaptation of Climate-Resilient Agriculture/Agroforestry and Carbon Sequestration. Organised by Joint Action Council of Tamilnadu Farmers Associations at Thangavelu Engineering College Campus, Karapakkam, Old Mahabalipuram Road, Chennai 600097, Tamil Nadu
10. **Resource Person:** Groundwater Aquifer Modelling – Hard Rock Aquifer Systems on 27/05/2025 (from 26 May to 30 May 2025) in the International Training Program on Sustaining Himalayan Water (SHIWA) at Sikkim University, Gangtok. Organised by the Sikkim University, Gangtok
11. **Resource Person:** Springs and Water Resources Management in the Himalayas – A case study of Leh, Ladakh on 26/05/2025 (from 26 May to 30 May 2025) in the International Training Program on Sustaining Himalayan Water (SHIWA) at Sikkim University, Gangtok. Organised by the Sikkim University, Gangtok
12. **Resource Person:** Soil and climate adaptation for cashew on 20/03/2025 and 21/03/2025 in the Improved Production Technology and Value-addition in Cashew at the KVK, Ariyalur District, Tamil Nadu, Organised by the Department of Horticulture, Central University of Tamil Nadu, Thiruvavur
13. **Panel Chairperson:** Resilient Water Systems for National Water Challenges on 04/12/2024 (from 02 December to 05 December, 2024) in the GeoSmart India 2024 Water Resource Management Symposium at the Hyderabad International Convention Centre (HICC), Hyderabad, organised by the GeoSmart India
14. **Resource Person:** Research - Disaster Risk Management on 09/11/2024 (from November 06 to November 17, 2024, in the ICSSR sponsored “ Two Week Capacity Building Programme on Academic Writing and Nuances of Research Publications for Faculty Members in Social Sciences” organised by the Department of Management, Central University of Tamil Nadu, Thiruvavur, Tamil Nadu
15. **Keynote Speaker:** Geospatial Technology in Disaster Management on 27/11/2024 in the GIS Day 2024 celebrations, on November 27, 2024, Organised and conducted at the Department of Civil Engineering, RGM College of Engineering & Technology (Autonomous), Nandyal
16. **Keynote Speaker:** Hazards Mitigation & Management and Climate Change Risk Reduction on 07/11/2024 (from November 06 to November 08, 2024), in the Comprehensive Course on Disaster Management for All Sectors, at the Tiruchirappalli District Collectorate. Organised by the Disaster Management Cell, Anna Administrative Staff College, State Administrative Training Institute, Government of Tamil Nadu, Chennai
17. **Keynote Speaker:** Coastal Hazards and Risk and Climate Change Risk Reduction on 04/11/2024 (from November 04 to November 06, 2024), in the Comprehensive Course on Disaster Management for All Sectors, at the Thanjavur District Collectorate. Organised by the Disaster Management Cell, Anna Administrative Staff College, State Administrative Training Institute, Government of Tamil Nadu, Chennai
18. **Keynote Speaker:** Climate Change Risk Reduction on 11/09/2024 (from September 11 to September 13, 2024), in the Comprehensive Course on Disaster Management for All Sectors, at the Mayiladuthurai District Collectorate. Organised by the Disaster Management Cell, Anna Administrative Staff College, State Administrative Training Institute, Government of Tamil Nadu, Chennai
19. **Keynote Speaker:** Coastal Hazard Mitigation & Management and Climate Change Risk Reduction on 10/09/2024 (from September 9 to September 11, 2024), in the Comprehensive Course on Disaster Management for All

- Sectors, at the Nagapattinam District Collectorate; Organised by the Disaster Management Cell, Anna Administrative Staff College, State Administrative Training Institute, Government of Tamil Nadu, Chennai
20. **Keynote Speaker:** Hyperspectral Remote Sensing in Disaster Studies on 12<sup>th</sup> January 2024 in the National Workshop on Hyperspectral Remote Sensing in Geo-resource Mapping Organized by the Centre for Geoinformatics and Planetary Studies, Periyar University, Salem – 636011, Tamil Nadu, India
  21. **Keynote Speaker:** Climate Change and the Arrival of Ancient Microorganisms on 21<sup>st</sup> November 2023 in the MicroArMoR-2023 AMR Awareness Week Symposium; Organised by the Department of Microbiology, Central University of Tamil Nadu, Thiruvarur, India
  22. **Resource Person:** Nature-based Solutions for Disaster Risk Reduction and Development Plan on 22<sup>nd</sup> May 2023 in the 3-Day Online Training Program on Nature-based Solutions: A Need for Integration in Development Plans. Organised by the Department of Coastal Disaster Management, Pondicherry University, Port Blair, Andaman, India
  23. **Resource Person:** Disaster Risk, Resilience, and Challenges – Geospatial Technology on 1<sup>st</sup> March 2023 2-Day National Seminar on ‘Current Trends in Geological Sciences’ from 1<sup>st</sup> March to 2<sup>nd</sup> March 2023 organised by National College, Tiruchirappalli, Tamil Nadu
  24. **Resource Person:** Introduction to QGIS and Spatial data Analysis, Image Processing, and Hands-on-Exercise on 17<sup>th</sup> to 18<sup>th</sup> of November 2022 Organized by Centre for Geoinformatics and Planetary Studies, Periyar University, Salem-636011, Tamil Nadu
  25. **Invited Speaker:** Climate change: Earth Science Perspectives on Two-Day Sensitization Programme for College Students on Climate Change: Impacts, Threats, Adaptation and Mitigation Strategies on 07<sup>th</sup> and 8<sup>th</sup> of November 2022 Organized By UGC-STRIDE, Central University of Tamil Nadu
  26. **Invited Speaker:** Introduction to Geology and GIS on 21<sup>st</sup> September 2022 part of UGC NET Coaching Class organised by the Department of Microbiology on 21<sup>st</sup> September 2022, Central University of Tamil Nadu
  27. **Resource Person:** Geospatial Technology in Water Resource Management and Sustainable Development on 24<sup>th</sup> May 2022 for Six-day Online FDP on “Applications of Remote Sensing and GIS for Ground Water Management Studies from 23<sup>rd</sup> May to 28<sup>th</sup> May 28, 2022. Organised by Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, No.42, Avadi-Vel Tech Road, Poonamallee - Avadi High Rd, Vel Nagar, Chennai, Tamil Nadu 600062, India
  28. **Invited Speaker:** Scopes and Career Opportunities in Earth Sciences on 11<sup>th</sup> April 2022, organized by the National College, Tiruchirappalli, Tamil Nadu
  29. **Invited Speaker:** Spatial Information Technology in Understanding Disaster Risk – Flood. Under the theme "Understanding Disaster Risk (Priority-I)-(Spatial Information Technology in Understanding Disaster Risk)" organized by the Kerala State Disaster Management Authority (KSDMA) on 07/April/2022
  30. **Invited Speaker:** Scopes and Career Opportunities in Earth Sciences, Geology Association Meeting, Department of Geology, National College, Tiruchirappalli, 11-04-2022
  31. **Co-Chair:** Session I: International Conference on Recent Advances in Water Science and Technology (ICRAWST-2021). Sri Shakthi Institute of Engineering and Technology, Tamil Nadu, India. 2-3 Dec 2021
  32. **Resource Person:** Geospatial Technology and Environment, Refresher Course is “Redefining, Rejuvenating and Reskilling: Environmental Sciences & Green Technology for Teaching, Research and Sustainability” MHRD UGC Refresher Course, Jai Narayan Vyas University, Jodhpur, Rajasthan on 20/11/2021
  33. **Resource Person:** Extreme Events and their Impacts on Water Resources and Agriculture - A Case Study. The Central University of Tamil Nadu. 28<sup>th</sup> of April 2021
  34. **Resource Person:** Innovative Geospatial and AI Applications in the WASH sector. Webinar on "Water for Public Health". NIH, Roorkee, 30th of June 2021
  35. **Resource Person:** Geospatial Technology in Disaster Management. Department of Remote Sensing, Bharathidasan University 22<sup>nd</sup> of April 2021
  36. **Resource Person:** Application of Remote Sensing and GIS in Disaster Management. UGC Human Resource Development Centre, University of Mumbai is conducting an Online Short-Term Course on ‘Disaster Management: An Integrated Approach’ from 23<sup>rd</sup> to 29<sup>th</sup> of October 2020. 28<sup>th</sup> of October 2020
  37. **Panellist:** Develop a Network of Universities to Work on Disaster-Related Issues. National Webinar Series - 2.0, Theme: Disaster Resilient India - 2030, Topic: P.M’s 10 Point Agenda on DRR &U.N. Day. Unnat Bharat Abhiyan (UBA) Sree Ayyappa College for Women, Chunkankadai, Nagercoil In association with Disaster Management and Rehabilitation Trust (DMRT), Nagercoil, Kanyakumari District, Tamil Nadu. 24<sup>th</sup> of October 2020

38. **Resource Person:** Environmental Studies using Geospatial Technology. UGC-Human Resource Development Centre, Jawaharlal Nehru University, New Delhi is organising the 4th Refresher Online Course in Environmental Studies beginning from September 7<sup>th</sup> to 19<sup>th</sup> September 2020. 15<sup>th</sup> of September 2020
39. **Speaker:** Role of Geospatial mapping in Urban Health. Role of Geospatial Mapping in managing Pandemic: Applications and Interventions for Resilience. National Institute of Disaster Management Ministry of Home Affairs, Govt. of India. 28<sup>th</sup> of July 2020
40. **Subject expert/Invited Lecture:** Dissemination of Landslide Hazard results for Societal benefits. National Brainstorming workshop on modelling fault zone induced surface mass transport in Himalayan Orogenic Terrains for the study of fault-related hazards in Himalayan towns (with Financial Assistance from the Ministry of Earth Sciences, Government of India). 16<sup>th</sup> to 17<sup>th</sup> March 2020. BITs, Mesra, Jharkhand
41. **Invited Lecture:** Understanding Geo-Informatics and Application of GIS tool in Project Management. Development Perspectives, Management and Practices (DPMP), Batch 3 at TISS AESDII. 22<sup>nd</sup> to 26<sup>th</sup> July 2019
42. **Invited Lecture:** Spatial data analysis i) Vector based and ii) Raster based. 21 days Training Programme on Capacity Building in Geospatial Technology at Himachal Pradesh University, Shimla. 18<sup>th</sup> June to 8<sup>th</sup> July 2019. 01/07/2019
43. **Invited Lecture:** Institutional Framework for Disaster Management in India. Advances in Disaster Management and Risk Reduction: A Remote sensing and GIS Approach", Pillai HOC College of Engineering & Technology, Rasayani, Panvel, Maharashtra. 24<sup>th</sup> to 28<sup>th</sup> June 2019
44. **Invited Lecture:** Fundamentals of GIS and its Applications in Airports. Management Development Programme on Results Based and Advanced CSR Programming for Senior Executives of Airports Authority of India (Western Region) at TISS AESDII Knowledge Sharing Network. TISS, Mumbai. 13<sup>th</sup> to 15<sup>th</sup> June 2019
45. **Invited Lecture:** Mapping disaster zones and risk analysis - Indian Experience. International Training Programme on "Climate Resilient Housing Technologies" (Sponsored by Ministry of External Affairs, Government of India under ITEC), at National Institute of Rural Development and Panchayati Raj (NIRDPR), Ministry of Rural Development, Govt. of India. 18<sup>th</sup> March to 14<sup>th</sup> April 2019
46. **Invited Lecture:** Topic on "Introduction to Geospatial Technology". National workshop on "Creating and Managing Unit Level Geo-Spatial Data Using Base Maps from Census of India" at International Institute for Population Sciences, Mumbai. 28<sup>th</sup> March to 1<sup>st</sup> April 2019
47. **Invited Lecture:** Topic on "Applications of Geospatial Technology for Mapping and Data Analysis". National workshop on "Creating and Managing Unit Level Geo-Spatial Data Using Base Maps from Census of India" at International Institute for Population Sciences, Mumbai. 28<sup>th</sup> March to 1<sup>st</sup> April 2019
48. **Invited Lecture:** Topic on "Creating the Thematic maps from Census Data". National workshop on "Creating and Managing Unit Level Geo-Spatial Data Using Base Maps from Census of India" at International Institute for Population Sciences, Mumbai. 28<sup>th</sup> March to 1<sup>st</sup> April 2019
49. **Invited Lecture:** Topic on "How to identify a significant research problem?". ICSSR sponsored a national workshop on "Excellence in Research" at Chh. Shahu Institute of Business Education and Research, Kolhapur, Maharashtra. 25<sup>th</sup> and 26<sup>th</sup> Feb 2019
50. **Invited Lecture:** Topic on "How to choose the best study design?". ICSSR sponsored a national workshop on "Excellence in Research" at Chh. Shahu Institute of Business Education and Research, Kolhapur, Maharashtra. 25<sup>th</sup> and 26<sup>th</sup> Feb 2019
51. **Member and Co-Chair the Session:** Session on "Coastal Aquifers". International Conference on Impact of Climate Change on Water Resources (ICWR2018). Periyar University, 12<sup>th</sup> to 13<sup>th</sup> July 2018
52. **Invited Lecture:** UGC Refresher Course on 'Biodiversity Conservation and Sustainable Development. Topic on 'Remote sensing and GIS for Environmental monitoring. Wednesday 13<sup>th</sup> June 2018 from 11.30 am. to 1.10 pm. UGC Human Resource Development Centre, University Of Mumbai and K.J.Somaiya College of Science and Commerce, Vidyavihar. June 01 to June 21, 2018
53. **Chair the Session:** topic on Disasters and Development: Convergence and Interdependence International Conference on "Reinforcing Institutional Decision Making in Disaster Preparedness and Mitigation." Jawaharlal Nehru University, New Delhi, 16<sup>th</sup> to 18<sup>th</sup> of Feb, 2018
54. **Co-Chair the Session:** topic on "Government and CSR in River Rejuvenation" – Conference on River Rejuvenation and its Socioeconomics impact: Organized by International Association for Human Values and The Art of Living on 5<sup>th</sup> – 6<sup>th</sup> Dec 2017, Bengaluru, India
55. **Invited Lecture:** topic on "Geospatial Applications in Mapping the Availability and Accessibility of Services to hamlets in parts of Udaipur districts: A Pilot Study" – Geospatial World Forum (GWF) and NRSC-NDC User Interaction Meet (UIM) - 2017: 22<sup>nd</sup> - 25<sup>th</sup> January 2017, Hyderabad, India

56. **Keynote speaker:** topic on “Applications of GIS and Remote Sensing in Policy, Planning and Development” - International Conference on Conflict and Economic Development (ConfEcoDev 2016): Organized by Centre for Study of Political Violence (CSPV) & Centre on International Economic Studies (CIES), O. P. Jindal Global University, Sonapat from 26<sup>th</sup> - 27<sup>th</sup> of September 2016
57. **Keynote speaker:** topic on “Mapping Inequality and Conflict in GIS. Tracing Patterns of Inequalities & Grievances in South Asia 3<sup>rd</sup> - 4<sup>th</sup> February 2016 Old Conference Hall Tata Institute of Social Sciences, Mumbai
58. **Keynote speaker:** topic on "**Disaster Response and Challenges**" at Periyar University is planning to organize a two-day Workshop on 'Advances in Geoinformatics' from 11<sup>th</sup> -12<sup>th</sup> January 2016
59. **Resource person:** topic on “National **Disaster Management: Issues and its Impact**” at NRSC, ISRO, Hyderabad training on Space Inputs for Disaster Management – Predictability, Early Warning & Mitigation during 15<sup>th</sup> - 19<sup>th</sup> June 2015
60. **Resource person:** topic on “**Using GIS for Mapping Conflict**” at TISS, Mumbai Ethnic Power Relations (EPR) consultation during 3<sup>rd</sup> – 4<sup>th</sup> of August 2015
61. **Discussant:** The topic on **GIS, ICT, and Role of Technology**, Centre for Excellence in Disaster Research on 21<sup>st</sup> September 2015, JNU, New Delhi
62. **Invited Lecture:** Disaster Mitigation and Its Challenges in Multi-Hazard Regions, Centre for Excellence in Disaster Research on 21<sup>st</sup> September 2015, JNU, New Delhi
63. **Chairing the session:** Round Table on **Disaster Response** 10th-11th September 2015, RISE2015 AmeriCares India and idobro, Mumbai
64. **Resource Person: GIS in Social Policy Targeting** Social Welfare Systems: Shifting Contexts and Alternative Strategies Workshop TISS, Mumbai TISS Feb. 23, 2015, March 24, 2015
65. **Resource Person:** topic on **Geo-informatics in disaster management potential and challenges from field perspectives** - User Interactive Meet (UIM) 2015 Talk NRSC, ISRO, Hyderabad, and NRSC Jan. 21 - 22, 2015, National Remote Sensing Centre (NRSC), ISRO.
66. **Resource Person:** SPIP-NRLM Chhattisgarh Workshop Raipur Govt. of Chhattisgarh Oct. 22- 23, 2013. **Ecosystem-based Livelihoods: A Situational Analysis for Entrepreneurship Development in the State of Chhattisgarh**
67. **Keynote Speaker:** topic on **Application of Geo-Informatics in a study of changes in Man-made and natural environment** - National Seminar on Geo-Spectrum: Towards New Frontier, Mumbai, India sponsored by UGC Feb. 26, 2013. Mandalis Ramnara in Ruia College, Matunga, Mumbai
68. **Keynote Speaker:** Demonstration of **GIS applications in Disaster Management** Workshop Belapur, India DDM, Konkan division March 8, 2013, March 8, 2013, Divisional Disaster Management Coordinator
69. **Invited Lecture:** XI Conference of the Parties - COP11 Conference Hyderabad, India TISS Oct. 10, 2012, Oct. 13, 2012, Ministry of Environment and Forests, India Convention on Biological Diversity Prepared and Presented the various thematic maps and reports of Indian coastal area, Mumbai, India
70. **Chair the Session:** International roundtable conference on “Humanitarian Logistics: Scope and Challenges” TISS, Mumbai 2010/12/13-14, and JTCDM, TISS, Mumbai, India
71. **Invited Lecture:** National Seminar on “Management Thoughts about Natural Disasters in Ancient Tamil classical Literature” Tamil University, Thanjavur, 2011/02/10-11, and Tamil University, Tamil Nadu
72. **Invited Lecture:** IT in Rural Development TISS, Tuljapur 2010/12/20-21 and TISS Presenter GIS applications in Rural Development, Maharashtra, India
73. **Invited Lecture:** Remote sensing and GIS application for Disaster Management Studies. State IAG, Kolkata
74. **Invited Lecture:** Fractured aquifer studies in Precambrian crystalline Terrain – Geoinformatics. Geological Society of India, Bangalore, India. 2009

*Also, more than 30 guest lecturers delivered the refresher courses and various training programmed*

#### Declaration

I hereby declare that all the information in this resume is facts or truth to my knowledge.

Thanks, and regards

-sd-

(Guru Balamurugan)