

Curriculum vitae

Dr Guru Balamurugan

Associate Professor and Head

Department of Geology, School of Earth Sciences
Central University of Tamil Nadu, Thiruvavur-610005, Tamil Nadu

Email: gurubala.jtcdm@gmail.com; gurubala@cutn.ac.in



ACADEMIC QUALIFICATION

Certificate Course 'Water Resource' (2016) - ITC, Twente University, Enschede, The Netherlands

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: 20 Years, Teaching: 15 years)

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

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

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

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 is established in the institute apart from teaching to carry 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

Study at ITC, The Netherlands (2015-16): Study the Integrated Water Resource Assessments with emphasis on Surface Water. As part of this study carried out 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

- 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

- 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

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)
- 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

UNIVERSITY ADMINISTRATIVE AND HONORARY WORK

- ✓ CUTN: Head of the Department, the Department of Geology (2020 onwards)
- ✓ CUTN: Chairperson for the various Purchase Committees (2020 onwards)
- ✓ CUTN: Member of Academic Council (2020 onwards)
- ✓ CUTN: Member NAAC Steering Committee (2023-24)
- ✓ CUTN: Committee Member in NAAC Criteria-V (Assessment period 2016-2021)
- ✓ CUTN: Member in NAAC DVV (Assessment period 2016-2021)
- ✓ CUTN: Chairperson in the Board of Studies, the Department of Geology (2020 onwards)
- ✓ CUTN: Member of the Board of Studies, the Department of Geography (2020 onwards)
- ✓ CUTN: Member of the Board of Studies, the School of Earth Sciences (2020 onwards)
- ✓ 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)

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 (Completed)	Rs. 10,00,000 Dr. Guru Balamurugan (PI) 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 (Completed)	USD 39,999/- Dr. Thomas O Dr. Tim Frazier Dr. Ramesh V Dr. Guru Balamurugan
3	NRDMS, DST, Govt. of India	21days Training Programme on "Geospatial Technology" Emphasis on Basic Concepts and Applications."	2018-2020 Completed	Rs. 10,00,000 Dr. Guru Balamurugan Dr. V Ramesh
4	NRDMS, DST, Govt. of India	21days Training Programme on "Geospatial Technology" Emphasis on Planning and Policy Development."	2016-2017 Completed	Rs. 10,00,000 Dr. Guru Balamurugan Prof. S Anbazhagan Dr. V Ramesh
5	ICSSR, Govt. of India	Smallholders in Peri-urban Agriculture: To What Extent Do Inclusive Modern Supply Chains Aid Their Survival?	(2015-2017) Completed	Rs. 28,00,000 PI: Sudha N, IGIDR, Mumbai CoPI: Dr. Guru Balamurugan CoPI: Elumalai K, JNU, Delhi
6	TISS, R&D	The study of the largest river Island of Majuli: its erosion, morphological changes, and environmental impact using Geoinformatics	(2015-2017) Completed	Rs. 3,00,000 PI: Dr. Guru Balamurugan
7	IDBI	Groundwater Exploration and Management, Model village study, Leh	(2012-2014) Completed	Rs. 7,00,000 PI: Prof. S. Parasuraman Dr. Guru Balamurugan
8	Max Planck Institutes and TISS	Study of periodical changes in physical features and its impact on natural resources in Mumbai (urban) using Geoinformatics techniques	(2013-2015) Completed	Rs.3,00,000/- PI: Dr. Guru Balamurugan
9	Tata Trust (JTCDM)	Mapping Conflict Patterns using GIS Applications	(2010-2012) Completed	Rs. 7,00,000 PI: Dr. Guru Balamurugan PI: Samrat Sinha
10	Tata Trust (JTCDM)	GIS Cell	(2008-2012) Completed	Rs.25,00,000/- PI: Prof. S. Parasuraman, Dr. Guru Balamurugan

Research and Publications: as of 31/July/2023

Author ID	Category	Web of Science	Scopus	Google Scholar
Scopus: 49962838300 & 57191875875 ResearcherID: A-5155-2019 Loop profile: 171915 Google Scholar: pGjFDG8AAAAJ	Citation	270	373	549
	h-index	9	10	12
	I10-index			15

RESEARCH GUIDANCE

Doctor of Philosophy (PhD.)

Completed : 05
Ongoing : 03 (Mr Aarif S; Ms Sujata K; Mr. Nasir)

Doctoral Degree Awarded:

1. **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.
2. **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.
3. **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.
4. **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.
5. **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.

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. Debasmita 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):

Completed : 14

Master's Degree (MSc/MA)

Completed : 70
Ongoing : 05

Master Degree (MSc/MA) Awarded:

1. **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.
2. **Mr Inwate Prabhudas Govind (2023)** - Suitable sites selection for artificial recharge structure in CUTN campus, Thiruvavur, Tamil Nadu, India using Geospatial Technology.
3. **Mr Sachin Kumar (2023)** - Identification of artificial recharge sites for Chennai basin using ArcGIS and Remote Sensing.
4. **Ms Pranalima Pujari (2023)** – Exploring the future prospect of the Fry method of strain analysis.
5. **Mr Umasankar Sahoo (2023)** – Assessment of groundwater quality and hydrogeochemical studies in the Mahakalpara area of Kendrapara district, Odisha.
6. **Mr Bhukya Vamshi Krishna (2023)** – Assessment of groundwater quality around Kothagudem watershed, Eastern Telangana, India.

7. **Mr Devashish Murmu (2022)** – Identification of Artificial Recharge Sites for Groundwater Development in Perambalur District, Tamil Nadu.
8. **Mr Harikrishnan S (2022)** – Groundwater Quality Mapping and its Impacts in Thiruvavur District, Tamil Nadu.
9. **MS. Mydhili SB (2022)** – Groundwater Potential Mapping and Sustainable Development in Villupuram District, Tamil Nadu.
10. **Mr Nivas R (2022)** – Morphological Changes in the Mid-Coast of Tamil Nadu Using Time-Series Remote Sensing Data, Tamil Nadu.
11. **Ms Aastha Agarwal (2020)** - Climate Change, Rainfall Variations, Extreme events and Impact on Agriculture.
12. **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.
13. **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.
14. **Mr Prakhar Bisht (2020)** - Groundwater Sustainability in Coastal Region through Artificial Recharge Structures and its impact on Water Resources and Agriculture using Geospatial Technologies.
15. **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.
16. **Ms Sanchari Ghosh (2020)** - Assessment of Coping Capacities and Mitigation Strategies in Recurring Landslide zones of Kurseong, Darjeeling.
17. **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.
18. **Mr Abhay Vashisht (2019)** - Retreating Glaciers in Kibber, Lahaul and Spiti District, Himachal Pradesh, India and Its Effect on the Agrarian Community.
19. **Ms Lakshmi S (2019)** - Urban Heat Island Mapping of Puducherry City using Geospatial Technology.
20. **Ms Priyanka Priyadarshini (2019)** - Flood Risk Mapping in parts of Bhubaneswar City using Geospatial techniques.
21. **Ms Salew Lohra (2019)** - Environmental impact analysis and sustainability in parts of Mao-Maram region, Senapati district, Manipur.
22. **Ms Vaishnavi Kapoor (2019)** Groundwater recharge and its impacts on the community: A case study on Naganadhi River basin.
23. **Mr Vijendra B. Sambhalwar (2019)** - Tropical Cyclone Heat Potential (TCHP) and Case Studies of Cyclone Gaja, Ockhi and Vardah.
24. **Ms Ann Martin (2020)** - Surface water dynamics of the 100th year flood and the socio-economic impact assessment of the affected farmers in Kerala.
25. **Mr Hareesh N A (2018)** – Analysis of real-time disaster data on social media (Twitter): Sri Lankan Floods and Cyclone Ockhi.
26. **Mr Sayantan Roy (2018)** – Groundwater poisoning and fluoride contamination affecting the public health of Rampurhat Sub-Division: A GIS approach.
27. **Mr Bharat Rao (2017)** - Identification of Probabilistic Oil Spill Area and Risk Mapping of Coastal Area of Mumbai using Geo-Informatics.
28. **Ms Lisa Teotia (2017)** - Mapping of Wetlands in Coastal Regulation Zone (CRZ) of Mumbai Island.
29. **Mr Praveen Krishna Bonu (2017)** - Identification and Mapping of Emergency Evacuation Routes during Cyclone and Tsunami for the City of Visakhapatnam using Geospatial Analysis.
30. **Mr Rishabh Maheshwari (2017)** - Drought study of Jaipur District and its impacts on Agricultural using Geospatial Technology.
31. **Ms Agnes Liji George (2017)** - Land use and land cover changes study in parts of Ramanagara Districts using Geospatial Technology.
32. **Ms Ankita Padalni (2016)** – Risk Assessment of Seismic Vulnerability of Building in Kathgodam City.
33. **Ms Disha Dwivedi (2016)** – River course changes and risk analysis of River Ganga, Allahabad using Geoinformatics Techniques.
34. **Mr Sumit Kumar Shahi (2016)** – Agricultural Damages due to Drought and its Analysis in parts of District Patna, Using GIS Techniques.
35. **Mr Swapnil Malusare (2016)** – Automatic detection of Damaged Physical features in a Disaster-Affected area using DIP.

36. **Mr Yuvraj Singh Rajput (2016)** – Plan to Develop an Emergency Operation Centre (EOC) using Geoinformatics: A case study of Gwalior, Madhya Pradesh.
37. **Mr Prathamesh (2015)** – Study of Post-Earthquake Impacts on Environment In the North District of Sikkim Using Geoinformatics Techniques.
38. **MMsRiya Saha (2015)** – Study of Agricultural Losses Due to Flood Through Remote Sensing and GIS in Bharatpur-1 Block at Murshidabad District, West Bengal.
39. **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.
40. **Mr Surendra Ram (2015)** – The Study of Meteorological Drought and its impact on Agriculture using Remote Sensing and GIS Techniques.
41. **Ms Vinita Kumari (2015)** – Groundwater Assessment of Bhuigaon village in Vasai Taluka of Thane District, Maharashtra using GIS Techniques.
42. **Mr Yash Yadav (2015)** – Hazard Assessment of Surat Floods – 2006 and 2013 using GIS and Remote Sensing.
43. **MMsArchana R B (2014)** – Development of Mangroves in Intertidal Zone of Mundra Coast, Gujarat, Geoinformatics, - Suitable Species Selection, - Community Participation.
44. **Ms Gayathri C (2014)** – Urban Environmental change analysis and Flood risk mapping of Mumbai ‘N’ Ward using Geo-informatics.
45. **Mr Mohd Suhail Shaikh (2014)** – Landslide Hazard Susceptibility Mapping in Parts of Mumbai Using Geoinformatics Techniques.
46. **Ms Muslonkar Neha Subhash Vardha (2014)** – Landuse and Landcover Change Detection Analysis along the CRZ of Ganjam District, Odisha.
47. **Mr Pranav Sethi (2014)** – Land use and land cover changes and its impact on groundwater resources in Gurgaon, Haryana using Geo-informatics techniques.
48. **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.
49. **Mr Sethu Deepak (2014)** – Geo-Informatics Based Urban Flood Inundation Model: A Study On Physical And Demographic Impacts of Floods In Parts of Mumbai.
50. **Mr Vijay Ganesh (2014)** – Suitability of Early Warning Systems in Landslide-Prone Areas of Mumbai Using Geo-Informatics: Case Study of Bhandup Area.
51. **Ms Apporva Jain (2013)** – Flood Hazard Zonation and Vulnerability Mapping in Runi Saidpur Block, Sitamarhi District, Bihar Using Geo-Informatics.
52. **Mr Aravind M S (2013)** – Application of Geoinformatics in Land Use Land Cover Change Detection Analysis in Mundra Coast, Gujarat.
53. **Mr Karthik Seshan (2013)** – Groundwater Potential Mapping and Artificial Recharge Using Geo-Informatics Leh Valley, Ladakh, India.
54. **Ms Priyanka Chowdhary (2013)** - Landslide Susceptibility Zonation Mapping Using Geoinformatics in Gangtok, Sikkim.
55. **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.
56. **Mr Ranjit Kumar Ray (2013)** – The Landslide Hazard Analysis of Guwahati Region Using Remote Sensing & GIS Application.
57. **Mr Shakti Sagar Sadashiv Dhole (2013)** – Geoinformatics Application in Hydrological Drought in Parts of Khatav Taluka of Satara District in Maharashtra State.
58. **Mr Arhat Wakode (2012)** – Application of Remote Sensing and GIS in Landslide Hazard Zonation Mapping – A Case Study of Kalimpong, West Bengal.
59. **Mr Himanshu Baswant (2012)** – Physical Damage Assessment of Flash Flood in affected areas of Phyang and Egoo village, Leh-Ladakh using Geo-Informatics.
60. **Mr Abhishek Wadekar (2012)** - Mapping the prevalence of Kidney diseases in parts of Canacona Taluka, Goa: A GIS analysis.
61. **Ms Aahna Srikanth (2011)** – Mapping Road Traffic Crashes Using GIS – A Case Study of Navi Mumbai.

62. **Ms Aditi Madan (2011)** – Land use / Land cover Change Detection Due to Urbanization: Using GIS Techniques and Remote Sensing, Yamuna River (A Study in Delhi Metro City).
63. **Mr Anil Kumar (2011)** – Mangrove Destruction and its Impact on Fishing Community of Mumbai – Remote Sensing and GIS Approach.
64. **Mr Ankit Jaiswal (2011)** - Mapping of different types of conflict-related incidents in Manipur using GIS techniques.
65. **Ms Deepshikha Purwar (2011)** – To Assess the Challenges Posed by Polluted Groundwater on Public Health – GIS Approach: Kanpur Region, Uttar Pradesh.
66. **Ms Dipty Nisha (2011)** – Detection of Changes and Alternative Methods in Cropping Pattern After 2008 Kosi Flood in Parts of Madhepura Region, Using Remote Sensing and GIS Techniques.
67. **Mr Vikas N Kurne (2010)** – Application of GIS in Post Flood Epidemics, A Case Study of Mumbai Floods.
68. **Mr Mangminlen Touthang (2010)** – Landslide Hazard Zonation Mapping Along Parts of NH-39, Manipur, Using Remote Sensing and GIS: The Socio-Economic Impact Assessment of Gopibung Area.
69. **Mr Ranit Chhaterjee (2010)** - Landslide Hazard Zonation Mapping and Remedial Measures for Prevention – A Case Study of Kalimpong, Darjeeling.
70. **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

Book, Abstract volume edited, Refereed Journal articles, Chapters in Book, Published Abstracts, Full Conference papers, and Abstracts

Book

1. Thomas O, Ramesh V, **Balamurugan Guru**, Himanshu Grover (2020). Disaster Management Curriculum in India. Rathore Academic Research Publications, New Delhi, India. ISBN: 978-81-94776-01-7.
2. Siddan Anbazhagan, Arumugam Jothibasu, **Guru Balamurugan** (June, 2019). **Climate Change in Water Resources**. Allied Publishers, New Delhi, India. ISBN: 978-93-87997-82-0
3. Sneha Krishnan, **Guru Balamurugan** (June 2011). Flood Risk Mapping, Publ: VDM Verlag. ISBN-10: 3639353838, ISBN-13: 9783639353839

Abstract Volume Edited

1. “Geomatics in Disaster Management” by **Guru Balamurugan**. Conference Abstract Volume by TISS - April 2010

List of publications

Journal articles (Peer-reviewed)

1. Somnath Bera, Kaushal Raj Gnyawali, Kshitij Dahal, Raquel Melo, Miao Li-Juan, **Balamurugan Guru**, G.V. Ramana (2023). Assessment of shelter location-allocation for multi-hazard emergency evacuation. International Journal of Disaster Risk Reduction. <https://doi.org/10.1016/j.ijdrr.2022.103435>. Ref. IJDRR 103435. ISSN:2212-4209 (*Scopus*) *IF: 5.00*
2. Sujata Kodag, Shibu K. Mani, **Guru Balamurugan**, Somnath Bera (2022). Earthquake and flood resilience through spatial Planning in the complex urban system. Progress in Disaster Science. <https://doi.org/10.1016/j.pdisas.2022.100219>. ISSN: 2590-0617. Vol 14: 100219. (*Scopus*). *IF: 6.30*
3. Gopal Barik, **Balamurugan Guru**, Francis Sangma (2021). Shoreline Changes Analysis and Forecast Using Digital Shoreline Assessment System 5.0: Evidence from Parts of East Coast of India. Journal of the Indian Society of Remote Sensing. <https://doi.org/10.1007/s12524-021-01424-4>. Vol. 49(11):2815-2830: ISSN: 0974-3006. (*Scopus*). *IF: 2.50*
4. Rudra Mohan Pradhan, **Balamurugan Guru**, Biswajeet Pradhan, Tapas Kumar Biswal (2021). Integrated multi-criteria analysis for groundwater potential mapping in Precambrian hard rock terranes (North Gujarat), India.

- Hydrological Sciences Journal (Taylor & Francis) <https://doi.org/10.1080/02626667.2021.1906427>. ISSN: 0262-6667. Vol.66(6):961-978. (*Scopus*). *IF*: 3.50
5. Somnath Bera, Raquel Melo, **Balamurugan Guru** (2021). Assessment of exposed elements in a changing built environment by using an integrated model of debris flow initiation and runout (Kalimpong region, Himalaya). *Bulletin of Engineering Geology and the Environment*. <https://doi.org/10.1007/s10064-021-02352-w>. Vol.80:7131–7152. ISSN:1435-9529. (*Scopus*). *IF*: 4.20
 6. Sachin Damle, Shibu K. Mani, **Guru Balamurugan** (2021). Natech guide words: A new approach to assess and manage natech risk to ensure business continuity. *Journal of Loss Prevention in the Process Industries*. <https://doi.org/10.1016/j.jlp.2021.104564>. Vol. 72. 104564. ISSN:0950-4230. (*Scopus*). *IF*: 3.50
 7. Somnath Bera, Vaibhav Kumar Upadhyay, **Balamurugan Guru**, Thomas Oommen (2021). Landslide inventory and susceptibility models considering the landslide typology using deep learning: Himalayas, India. *Natural Hazards*. <https://doi.org/10.1007/s11069-021-04731-8>. Vol. 108: 1257-1289. ISSN:0921-030X. (*Scopus*). *IF*: 3.70
 8. Damle Sachin., Mani Shibu K., **Balamurugan Guru.**, (2021). Risk Management of Technological Accidents Triggered by Natural-Hazards (Natech): A Review of Relevant Indian Legislation. *Disaster Advances*. Vol. 14 (4) April (2021) pp. 95-106. ISSN:0974-262X. (*Scopus*). *IF*: 0.297
 9. Rahul Rajaram Hirwe., **Balamurugan, Guru.**, (2021). Assessing Rooftop Solar Capacities for Green House Gas Mitigation Potential in India. *Disaster Advances*. Vol. 14 (4) April (2021) pp. 50-58. ISSN: 0974-262X. (*Scopus*). *IF*: 0.297
 10. Rahul Rajaram Hirwe, Somnath Bera, Shouraseni Sen Roy, **Balamurugan Guru** (2021). A Study on Solar and Green House Gas Mitigation Potential in India by using AHP Method and Geospatial Technology. *International Journal of Renewable Energy Research*. <https://doi.org/10.20508/ijrer.v11i1.11758.g8132>. Vol.11 (1), March 2021: pp. 295-307. ISSN:1309-0127. (*Web of Science*).
 11. Rahul R Hirwe, Krishnan, B., **Balamurugan, Guru** (2021). Leveraging on Repowering of Wind sites for potential Wind-Solar Hybrid Capacities: A Case Study. *International Energy Journal*. 21 (1). pp. 183-192. ISSN: 1513-718X (*Web of Science*). *IF*: 0.700
 12. Elumalai Kannan., **Balamurugan Guru.**, Sudha Narayanan (2021). Spatial economic analysis of agricultural land use changes a case of peri-urban Bangalore, India. *Journal of the Asia Pacific Economy*, DOI: 10.1080/13547860.2020.1717285. Vol 26 (1): 34-50. ISSN:1354-7860. (*Scopus*). *IF*: 1.40
 13. Somnath Bera, **Balamurugan Guru**, Thomas Oommen (2020). Indicator-based approach for assigning physical vulnerability of the houses to landslide hazard in the Himalayan region of India. *International Journal of Disaster Risk Reduction*. 50, 101891. <https://doi.org/10.1016/j.ijdrr.2020.101891>. ISSN:2212-4209. (*Scopus*). *IF*: 5.00
 14. **Guru, Balamurugan.**, George, A, Liji., Kusuma, K. N., Kapoor, V. (2020). Artificial Recharge and its Impact on Groundwater Sustainability and Socioeconomic Status in Parts of Kumudvathi River Basin. Special Issue: *Journal of the Geological Society of India*, pp. 49-59. <https://doi.org/10.17491/cgsi/2020/156159>. ISSN:0016-7622. (*Scopus*). *IF*: 1.30
 15. Somnath Bera., **Balamurugan Guru.**, Ranit Chatterjee., Rajib Shaw (2020). Geographic variation of resilience to landslide hazard: A household-based comparative studies in Kalimpong hilly region, India. *International Journal of Disaster Risk Reduction*. 46, 101456. <https://doi.org/10.1016/j.ijdrr.2019.101456>. ISSN:2212-4209. (*Scopus*). *IF*: 5.00
 16. Rolland Andrade., **Balamurugan Guru.**, (2020). Recharge site delineation through integrated geophysical hydrological and GIS approach – A basic understanding with case studies from the Indian subcontinent. *Groundwater for Sustainable Development*. 10, 100343. (Elsevier) <https://doi.org/10.1016/j.gsd.2020.100343>. ISSN:2352-801X. (*Scopus*). *IF*: 5.90
 17. Francis Sangma., **Balamurugan Guru** (2020). Watersheds Characteristics and Prioritization Using Morphometric Parameters and Fuzzy Analytical Hierarchical Process (FAHP): A Part of Lower Subansiri Sub-Basin. *Journal of the Indian Society of Remote Sensing*. 48(3):473-496. Online ISSN: 0974-3006: Print ISSN 0255-660X: <https://doi.org/10.1007/s12524-019-01091-6>. (*Scopus*). *IF*: 2.50
 18. Rahul Rajaram Hirwe and **Balamurugan Guru** (2019). Study of Renewable Energy Certificate Market in India. *International Journal of Earth Sciences and Engineering (Special Issue on Green House Buildings and Infrastructures Renewable and Sustainable Energy Resources)*, (CAFET-INNOVA Technical Society) India. 2019 (April), 12 (02): 86-90. ISSN 0974-5904. DOI:10.21276/ijee.2019.12.0204.
 19. Somnath Bera, **Balamurugan Guru**, Ramesh V (2019). Evaluation of landslide susceptibility models: a comparative study on the part of Western Ghat Region, India. *Remote Sensing Applications: Society and Environment (Elsevier)*,

- 2019 (January), 13:39–52. ISSN: 2352-9385. <https://doi.org/10.1016/j.rsase.2018.10.010>. <https://www.sciencedirect.com/science/article/pii/S2352938517303099>. (*Scopus*). *IF: 4.70*
20. Lakshmi Ram Prasath H, Kusuma KN, Chaitanya Sandaka, **Balamurugan Guru** (2019). Frequency Ratio Modelling using Geospatial Data to Predict Kimberlite Clan of Rock Emplacement Zones in Dharwar Craton, India. *International Journal of Applied Earth Observations and Geoinformation* (Elsevier). 2019 (February), 74:191-208. <https://doi.org/10.1016/j.jag.2018.08.019>: ISSN: 0303-2434. (*Web of Science*). *IF: 7.50*
21. Somnath Bera, **Guru Balamurugan**, Ramesh V, Habib A Mirdda, (2017). Landslide Susceptibility Zonation Using Relative Effect Model in Part of Mahad Taluka, Maharashtra, India. *International Journal of Earth Sciences and Engineering* (CAFET-INNOVA Technical Society), India. 2017 (October), 10(05):1020-1028. ISSN: 0974-5904. <https://doi.org/10.21276/ijee.2017.10.0513>.
22. **Guru Balamurugan**, Karthik Seshan, Somnath Bera (2017). Frequency ratio model for groundwater potential mapping and its sustainable management in cold desert, India. *Journal of King Saud University – Sciences*, (Elsevier). 2017 (July), 29(3):333-347. <http://dx.doi.org/10.1016/j.jksus.2016.08.003>. ISSN: 1018-3647. (*Scopus*). *IF: 3.80*
23. Francis Sangma, **Guru Balamurugan** (2017). Morphometric Analysis of Kakoi River Watershed for Study of Neotectonic Activity Using Geospatial Technology. *International Journal of Geosciences* (Scientific Research Publishing), 2017 (November), 8:1384-1403. <https://doi.org/10.4236/ijg.2017.811081>. ISSN: 2156-8359. (*Google Scholar IF: 0.560*).
24. **Balamurugan Guru**, Ramesh Veerappan, Francis Sangma, Somnath Bera (2017). Comparison of probabilistic and expert-based models in landslide susceptibility zonation mapping in part of Nilgiri District, Tamil Nadu, India. *Spatial Information Research* (Springer). 2017 (October) 25 (6): 757-768. ISSN: 2366-3286. <https://doi.org/10.1007/s41324-017-0143-1>. (*Web of Science*). *IF: 2.40*
25. Sema Hinotoli V., **Balamurugan Guru**, and Ramesh Veerappan (2017). Fuzzy gamma operator model for preparing landslide susceptibility zonation mapping in parts of Kohima Town, Nagaland, India. *Modeling Earth Systems and Environment* (Springer): 2017 (June), 3(2): 499-514, <https://doi.org/10.1007/s40808-017-0317-9>. ISSN: 2363-6203. (*Web of Science*). *IF: 3.00*
26. **Guru Balamurugan**, Veerappan Ramesh, Mangminlen Touthang (2016). Landslide susceptibility zonation mapping using frequency ratio and fuzzy gamma operator models in part of NH-39, Manipur, India. *Natural Hazards* (Springer), 2016 (October) 84 (1) 465-488: DOI: 10.1007/s11069-016-2434-6. : ISSN: 0921-030X. (*Scopus*). *IF: 3.70*
27. **Balamurugan Guru**, Anubhooti (2015). Urban growth effects on land use changes leading to natural hazards in parts of Mumbai metro city, India. *Disaster Advances* (World Research Journal), India. 2015 (October), 10/2015;8 (10) 1-14. ISSN: 0974-262X. (*Scopus*). *IF: 0.297*
28. **Balamurugan Guru**, Sridhara Aravind M (2015). Land use land cover changes in the pre-and post-earthquake affected area using Geoinformatics – Western Coast of Gujarat, India. *Disaster Advances* (World Research Journal), India. 2015 (April), 02/2015; 8(4) 1-14. ISSN: 0974-262X. (*Scopus*). *IF: 0.297*
29. Siddharth Bhatia, **Guru Balamurugan**, Annu Baranwal (2014). High arsenic contamination in drinking water hand-pumps in Khap Tola, West Champaran, Bihar, India. *frontiers in Environmental Science* (Frontiers Media SA), 2014 (November), 2: 1-8. ISSN: 2296-665X. <https://doi.org/10.3389/fenvs.2014.00049>. (*Scopus*). *IF: 4.60*
30. S. Anbazhagan, M.K. Das and **G. Balamurugan**, (2006). Hydrogeochemical Studies in Precambrian Hard Rock Aquifer System, Hosur. *Indian Journal of Geochemistry* (Varanasi: Indian Association of Geochemists). 2009 (December), 21(2), 519-535. ISSN: 0970-9088.

Chapters in Book/Edited Volume

1. Rishabh Maheshwari, **Balamurugan Guru**, Malarvizhi M., (2022). Climate Change, Drought Assessment and Analysis on Agriculture Impacts – Using Geospatial Technology, Udaipur District, Rajasthan, India. *Impact of Climate Change Mitigation & Adaptation*. Edited by Velmurugan P Shanmugam and S. Nagarajan. Published by SSDN PUBLISHERS AND DISTRIBUTORS, New Delhi 110002 (India). ISBN No. 978-93-88950. pp 192-212.
2. Malarvizhi Muthusamy, **Balamurugan Guru**, (2022). Climate Change, Extreme Events and its Impacts – India. *Impact of Climate Change Mitigation & Adaptation*. Edited by Velmurugan P Shanmugam and S. Nagarajan. Published by SSDN PUBLISHERS AND DISTRIBUTORS, New Delhi 110002 (India). ISBN No. 978-93-88950. pp 213-212-227.
3. Pradhan, R.M., Deshmukh, R., Chandrasekhar, E., **Balamurugan, G.**, Biswal, T.K. (2022). Geoelectrical Studies for Groundwater Exploration in Fractured Rock Terrane (Ambaji Basin, India). In: et al. *New Prospects in*

Environmental Geosciences and Hydrogeosciences. CAJG 2019. Advances in Science, Technology & Innovation. Springer, Cham. https://doi.org/10.1007/978-3-030-72543-3_115. ISBN: 978-3-030-72542-6

4. **Balamurugan Guru.**, Pradheeps M., Anbazhagan S., Kusuma KN., (2021). Impact of the brick kiln on agricultural land and environment: A case study. Accepted (2021).
5. A. Jothibas, S. Anbazhagan and **Guru Balamurugan** (2019). Impacts of Climate Change Scenario and Sensitivity Assessment of Ponnaiyar River Basin, Southern India. *Climate Change in Water Resources*, Edited by S. Anbazhagan, A. Jothibas, Guru Balamurugan. 06/2019: Published by Allied Publishers Pvt. Ltd, New Delhi, India, pages 1-10; ISBN: 978-93-87997-82-0.
6. Pranav Sethi, **Balamurugan Guru**, Anbazhagan S, Jothibas A (2019). Urban Growth and its Impact on Groundwater Resources and Sustainability in Gurugram Block, Using Geospatial Technology. *Climate Change in Water Resources*, Edited by S. Anbazhagan, A. Jothibas, Guru Balamurugan. 06/2019: Published by Allied Publishers Pvt. Ltd, New Delhi, India, pages 185-202; ISBN: 978-93-87997-82-0.
7. S Anbazhagan, A Chatterjee, AS Sethupathi, **Guru Balamurugan**, V Ramesh (2013): *Remote Sensing and GIS for Landslide Hazard Mapping – Case Study from Mumbai, India*. *Landslides and Environmental Degradation*, Edited by R.A. Singh, 01/2013: Gyanodaya Prakashan, Nainital, India, pages 89-106; ISBN: 81-85097-90-9.
8. Siddan Anbazhagan, **Balamurugan Guru**, T.K. Biswal (2011): *Remote Sensing in Delineating Deep Fractured Aquifer Zones*. *Geoinformatics in Applied Geomorphology*, First edited by Siddan Anbazhagan S. K. Subramanian Xiaojun Yang, 06/2011: chapter Remote Sensing in Delineating Deep Fractured Aquifer Zones: pages 205-229; CRC Press., ISBN: 13: 978-1439830482
9. Biswal, T. K, Anbazhagan S, Arivazhagan, S. **Guru Balamurugan**, Krishanu Bandyopadhyay and Mary (2009): *Horizontal gliding and nappe sheets in the Charnockite hills, East of Salem, Tamil Nadu*. *Exploration Geology and Geoinformatics*, 1st edited by Anbazhagan. S, Venkatachalapathy, R. Neelakantan, R, 01/2009: pages 147-155; Macmillan India Ltd., ISBN: 10:0230-63867-8
10. **Balamurugan Guru**, S Anbazhagan, T.K. Biswal, K.N. Kusuma (2009): *Surface Temperature Mapping using ETM, TIR images in parts of Precambrian Terrain, India*. *Exploration Geology and Geoinformatics*, Edited by S. Anbazhagan, R. Venkatachalapathy, R. Neelakantan, 01/2009: chapter Surface Temperature Mapping using ETM, TIR images in parts of Precambrian Terrain, India.: pages 237-244; Macmillan., ISBN: 10:0230-63867-8.
11. S Arivazhagan, **Guru Balamurugan**, KN Kusuma, S Anbazhagan (2009): *Spectral Reflectance Studies of Lunar Analog Rocks*. *Exploration Geology and Geoinformatics*, Edited by S Anbazhagan, R Venkatachalapathy, R Neelakantan, 01/2009: chapter Spectral Reflectance Studies of Lunar Analog Rocks: pages 245-254; Macmillan Publishers India Ltd., ISBN: 10:0230-63867-8.
12. **Balamurugan, Guru.**, Ramasamy S.M., (2006). Tectonic grains and slope with special reference to landslide in Palani to Kodaikanal Ghat road using remote sensing and GIS Techniques. Ed. Basavarajappa, H.T., Prakash Narasimha, K.N., Madesh, P., Suresh, R., Balasubramanian, A., **Remote sensing and GIS Applications**. Publ. Bellur Prakashana, Mysore, India. 96-102.
13. Anbazhagan, S., **Balamurugan, G.**, and Dasgupta, S., Persai. P., (2006), Remote Sensing and GIS for groundwater development plan in drought-prone area Tamil Nadu. In: Basavarajappa. H.T., PrakashNarasimha, K.N., Madesha.P., Suresh.B., and Balasubramanian.A., (eds). **Remote sensing and GIS Applications**. Bellur Prakashana, Mysore. 134-139.

Full Paper in Conference Proceedings/Documents

1. H. R. Rajaram and **G. Balamurugan**, 2020. "A Study on Green House Gas Mitigation from Solar Parks in India," 2020 International Conference and Utility Exhibition on Energy, Environment and Climate Change (ICUE), Pattaya City, Thailand, 20-22 October, 2020, pp. 1-8, DOI: 10.1109/ICUE49301.2020.9307039.
2. **Balamurugan Guru**, Himanshu Baswant, Prakash Priyadarshi, and Debasmita Majumder (Jan. 2016): Damage Assessment Challenges and Disaster Development Conundrum - A case study of Leh flash flood 2010 using Geoinformatics. IEEE Workshop on Distributed Systems for Coordinated Disaster Management, IIM Calcutta, India January 2nd - 3rd, pp. 21-26; 2016.
3. **Balamurugan Guru** and Prakash Priyadarshi (Feb. 2015): Study the 2013 Flood Damages and Risk Assessment in Kedarnath Area using Geoinformatics Techniques. International Conference on Climate Change and Disaster Management. Organized by: International Academy of Astronautics, Kerala State Council for Science Technology and Environment, International Institute of Space Law February 26-28, 2015 Thiruvananthapuram.

4. Francis Sangma and **Balamurugan Guru** (Feb. 2015): Flood and Bank Erosion Analysis of Majuli Island, Assam using Geoinformatics. International Conference on Climate Change and Disaster Management. Organized by: International Academy of Astronautics, Kerala State Council for Science Technology and Environment, International Institute of Space Law February 26-28, 2015 Thiruvananthapuram.
5. **Balamurugan Guru**, Muslonkar Neha, Anubhooti Y (Dec. 2014): Study The Land Use and Land Cover Changes and CRZ in the Coastal Area of Ganjam District, Odisha. International Society of Photogrammetry and Remote Sensing (ISPRS), Mid-Term Symposium of the Technical Commission VIII -, Hyderabad, India; 12/2014
6. TK Biswal, **Guru Balamurugan**, S Anbazhagan (Feb. 2013): Groundwater movement in fractured hard rock terrain - A case study of Precambrian Crystalline formation using geo-informatics and field techniques. National Seminar on Eco-friendly Mineral Development & Groundwater Management, Udaipur, India; 02/2013
7. **Balamurugan Guru**, N Roy, Samrat S, Vikas N Kurne, Deepishika Purwar, Siddarth DD (Dec. 2011): Applications of GIS in Public Health Risk Reduction – ArcGIS approach. 12th ESRI India User Conference, Noida, India; pp. 1-11; 12/2011
8. **Guru Balamurugan**., Anbazhagan, S., and Biswal, T.K., (Dec. 2008). Remote sensing for Delineating Deep Aquifer Zones, Hosur-Rayakottai Region, India. National Symposium on Advances in Remote Sensing Technology and Applications with Special Emphasis on Microwave Remote Sensing and Annual Convention of Indian Society of Remote Sensing (ISRS), Ahmedabad, Gujarat, India. December 18-20, 2008.

Presentation in Conferences/Seminars/Workshops

1. 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, 11th-13th March 2019. Special Centre for Disaster Research at JNU. Delhi
2. **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. 12th – 13th July 2019 at Periyar University, Salem, India
3. **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" 16th - 18th Feb 2018. Special Centre for Disaster Research at JNU. Delhi
4. **Guru Balamurugan** (2017). Socio-Economic Impact Assessment in Kumudvathi River Basin, Karnataka. International Conference on Innovative Methodologies in Rejuvenating Rivers & its Socio-Economic Impacts. 5th - 6th December 2017. Organized By Vyakti Vikas Kendra India (VVKI) & International Association of Human Values (IAHV), Bengaluru, India.
5. **Guru Balamurugan**, Ramesh V, and Pradheeps M (2017). Application of Geospatial Technology in Statelessness. Conference on Statelessness and Citizenship on 29th – 30th November 2017 organized by Tata Institute of Social Sciences, Mumbai.
6. 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 7th – 8th February 2017. Jamia Millia Islamia, New Delhi, India
7. 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.
8. 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.
9. 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; 9th -10th April 2010.
10. 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; 9th -10th April 2010.

11. **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; 9th Sep 2010.
12. **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 3rd - 6th 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 9th – 10th April, 2010. This 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 8th 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 25th 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 8th November to 9th November 2022 sponsored by UGC-STRIDE Component-1, Government of India. Central University of Tamil Nadu, Thiruvavur, Tamil Nadu, India.
4. Coordinator - 21 Day Summer/Winter School on Geospatial Technology & Its Applications (GeoTiA-2022)" from 21st November to 11th December 2022 Sponsored by NRDMS-DST (Govt. of India). Central University of Tamil Nadu, Thiruvavur, Tamil Nadu, India.
5. Member of National Conference Committee on "Climate Change 2022" from 20th July 20 to 21st July 2022, Sponsored by UGC-STRIDE, Component-1, Government of India. Central University of Tamil Nadu, Thiruvavur, Tamil Nadu, India.
6. Coordinator - 21 Day Summer/Winter School on Geospatial Technology & Its Applications (GeoTiA-2019)" from 3rd December to 23rd December 2019 Sponsored by NRDMS-DST (Govt. of India).
7. Coordinator - 21 Day Summer/Winter School on Geospatial Technology & Its Applications (GeoTiA-2017)" from 20th March to 9th 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 23rd June to 4th July 2014.
9. Convenor - 2-Week training programme on "Basic and Advanced Training on Geoinformatics for Architects and Civil Engineers" TISS, Deonar, Mumbai from 24th November to 5th 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 27th September to 1st October 2010.
11. Convenor - 3 day workshops on "GIS application and emphasis on Rural Development" from 12th to 14th September 2013, TISS, Hyderabad.
12. Convenor - 2 day workshop on "GIS applications and emphasis on Livelihood and Resource Mapping" from 27th and 28th 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)
 - Hydrogeology and Sustainable Development (Theory)
 - Hydrogeology (Practical)
 - Remote Sensing and GIS (Theory)
 - Remote Sensing and GIS (Practical)
 - Geostatistics and Computer Applications in Geosciences (Theory)
 - Research Ethics (PhD.)
 - Geospatial Technology and Modelling in Groundwater Resources (PhD.)
 - 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*)
 - Research Methodology (PhD) (*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, 27th and 28th 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, 4th - 8th 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. 31st May - 4th 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, 8th – 12th 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. 22nd - 28th July 2006.
11. Participated in the Quality Improve Programme (QIP) "Geographic Information Systems and Its Applications", IIT Bombay, Mumbai – 400076. 14th – 18th 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 (12th Nov-9th Dec 2004).
13. Participated in the ERDAS training program on ERDAS Imagine Professional, Vector & Virtual GIS (10th – 14th January 2005)
14. ESRI training program on ArcGIS 9.0 at IIT Bombay, Mumbai, India (August 2004 and October 2004).

Expert Committee talks

1. *IIRS, Dehradun* - Aquifer modelling reference to Fractured Aquifer System (2008).
2. *Periyar University, India* - Remote Sensing and GIS for Groundwater zonation (2007).

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

1. **Resource Person:** Nature-based Solutions for Disaster Risk Reduction and Development Plan on 22nd May 2023 for 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.
2. **Resource Person:** Disaster Risk, Resilience, and Challenges – Geospatial Technology on 1st March 2023 2-Day National Seminar on 'Current Trends in Geological Sciences' from 1st March to 2nd March 2023 organised by National College, Tiruchirappalli, Tamil Nadu.
3. **Invited Speaker:** Introduction to Geology and GIS on 21st September 2022 part of UGC NET Coaching Class organised by the Department of Microbiology on 21st September 2022, Central University of Tamil Nadu.
4. **Resource Person:** Geospatial Technology in Water Resource Management and Sustainable Development on 24th May 2022 for Six-day Online FDP on "Applications of Remote Sensing and GIS for Ground Water Management Studies from 23rd May to 28th 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.
5. **Invited Speaker:** Scopes and Career Opportunities in Earth Sciences on 11th April 2022, organized by the National College, Tiruchirappalli, Tamil Nadu.
6. **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.
7. **Invited Speaker:** Scopes and Career Opportunities in Earth Sciences, Geology Association Meeting, Department of Geology, National College, Tiruchirappalli, 11-04-2022.
8. **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.
9. **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 Naraian Vyas University, Jodhpur, Rajasthan on 20/11/2021.
10. **Resource Person:** Extreme Events and their Impacts on Water Resources and Agriculture - A Case Study. The Central University of Tamil Nadu. 28th of April 2021.
11. **Resource Person:** Innovative Geospatial and AI Applications in the WASH sector. Webinar on "Water for Public Health". NIH, Roorkee, 30th of June 2021.
12. **Resource Person:** Geospatial Technology in Disaster Management. Department of Remote Sensing, Bharathidasan University 22nd of April 2021.

13. **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 23rd to 29th of October 2020. 28th of October 2020.
14. **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. 24th of October 2020.
15. **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 7th to 19th September 2020. 15th of September 2020.
16. **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. 28th of July 2020.
17. **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). 16th to 17th March 2020. BITs, Mesra, Jharkhand
18. **Invited Lecture:** Understanding Geo-Informatics and Application of GIS tool in Project Management. Development Perspectives, Management and Practices (DPMP), Batch 3 at TISS AESDII. 22nd to 26th July 2019.
19. **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. 18th June to 8th July 2019. 01/07/2019.
20. **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. 24th to 28th June 2019.
21. **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. 13th to 15th June 2019
22. **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. 18th March to 14th April 2019
23. **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. 28th March to 1st April 2019
24. **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. 28th March to 1st April 2019
25. **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. 28th March to 1st April 2019
26. **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. 25th and 26th Feb 2019
27. **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. 25th and 26th Feb 2019
28. **Member and Co-Chair the Session:** Session on "Coastal Aquifers". International Conference on Impact of Climate Change on Water Resources (ICWR2018). Periyar University, 12th to 13th July 2018.
29. **Invited Lecture:** UGC Refresher Course on 'Biodiversity Conservation and Sustainable Development. Topic on 'Remote sensing and GIS for Environmental monitoring. Wednesday 13th 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.

30. **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, 16th to 18th of Feb, 2018
31. **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 5th – 6th Dec 2017, Bengaluru, India.
32. **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: 22nd - 25th January 2017, Hyderabad, India
33. **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 26th - 27th of September 2016.
34. **Keynote speaker:** topic on “Mapping Inequality and Conflict in GIS. Tracing Patterns of Inequalities & Grievances in South Asia 3rd - 4th February 2016 Old Conference Hall Tata Institute of Social Sciences, Mumbai
35. **Keynote speaker:** topic on "Disaster Response and Challenges" at Periyar University is planning to organize a two-day Workshop on 'Advances in Geoinformatics' from 11th -12th January 2016.
36. **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 15th - 19th June 2015.
37. **Resource person:** topic on “Using GIS for Mapping Conflict” at TISS, Mumbai Ethnic Power Relations (EPR) consultation during 3rd – 4th of August 2015
38. **Discussant:** The topic on **GIS, ICT, and Role of Technology**, Centre for Excellence in Disaster Research on 21st September 2015, JNU, New Delhi
39. **Invited Lecture:** Disaster Mitigation and Its Challenges in Multi-Hazard Regions, Centre for Excellence in Disaster Research on 21st September 2015, JNU, New Delhi
40. **Chairing the session:** Round Table on **Disaster Response** 10th-11th September 2015, RISE2015 AmeriCares India and idobro, Mumbai
41. **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.
42. **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.
43. **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.**
44. **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
45. **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.
46. **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
47. **Chair the Session:** International roundtable conference on “Humanitarian Logistics: Scope and Challenges” TISS, Mumbai 2010/12/13-14, and JTCDM, TISS.
48. **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, Tamilnadu
49. **Invited Lecture:** IT in Rural Development TISS, Tuljapur 2010/12/20-21 and TISS Presenter GIS applications in Rural Development
50. **Invited Lecture:** Remote sensing and GIS application for Disaster Management Studies. State IAG, Kolkatta.
51. **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 contained in this resume is facts or truth to my knowledge.

Thanks, and regards

(Guru Balamurugan)