

1. NAME :- **Dr. M.MUTHUKUMAR**

2. DESIGNATION

**Assistant professor  
Spatial Technologies  
Department of Rural Development  
Gandhigram Rural Institute-Deemed University  
Gandhigram- 624 302  
Dindigul District, Tamilnadu, India.**



3. EDUCATIONAL QUALIFICATION

<b>Institutional Address</b>	<b>Year Passing</b>	<b>Degree Obtained</b>	<b>Areas Of Specification</b>	<b>CLASS OBTAINED AND RANK if any</b>	<b>Percentage of marks / CGPA</b>
Qualified the <b>STATE ELIGIBILITY TEST (SET) FOR LECTURESHIP, MARCH 2006, EARTH ATMOSPHERIC, OCEAN &amp; PLANETARY SCIENCES</b>					
Centre for Remote Sensing Bharathidasan University	2009	<b>Ph.D</b>	Geological Remote Sensing	Commended	
Centre for Remote Sensing Bharathidasan University	April 2004	<b>M.Tech</b>	Geological Remote Sensing and Geoinformatics	I st Class	83%
Presidency College Madras University	May 2002	<b>M. Sc</b>	Geology	Ist Class With Distinction (IInd Rank)	76.75%
Alagappa Govt. Arts College Madurai Kamaraj University	April 2000	<b>B. Sc</b>	Geology	Ist Class (IInd Rank)	62.5%

#### 4. EXPERIENCE

##### 4.1 TEACHING EXPERIENCE

S.No.	Institute/ University/	Designation	Duration		Length of service in years
			From	To	
1.	GRI - DU	Assistant Professor	31.07.2010	Till date	
2.	CENTRE FOR REMOTE SENSING BHARATHIDASAN UNIVERSITY TIRUCHIRAPPALLI – 620 023	Teaching courses on Geospatial Technology in Geology, Mineral and Hydrocarbon, Groundwater exploration and Natural disaster mapping and mitigation for M.Sc Geoinformatics, M.Tech Remote sensing and M.Tech Geotechnology courses from 15.09.2004 to 30.07.2010.			

##### 4.2 RESEARCH EXPERIENCE :

##### **4.2.1 Sponsored Research Projects (6 Years)**

SI. No	Position/ Period	Sponsoring Organization	Title of the Project	Description of works and Responsibilities
1	Co – Investigator 16.11.2010 to Till Date	Space Application Centre (SAC), Ahmedabad.	In Project “PRACRITI” Models to study the impact of sea level rise on coastal environment of India	The major objective of the study is to develop coastal environments along Indian coast to understand impact of predicted Sea Level Rise (SLR) on the coastal resources and ecosystem.
2	Junior Research Scientist 30- 04-2009 To 30.07.2010	Oil Industry Development Board, Ministry of Petroleum and Natural Gas, Govt of India, New Delhi, India.	“RES-OIL” (Integrated Remote Sensing and GIS Technologies for Targeting Hydrocarbon Locales from Soil tonal and Geochemical anomalies related to Oil and Gas Seepage in selected basins of India.	Exploration of Oil & Natural Gas with help of Geomatics Technology in the three Major basins of India i. 3D Visualization of Surface and Subsurface Features ii. Interpretation and mapping of Surface and Subsurface Faults iii. Identification of possible sites for Oil seepage
3	Research Associate 18-10-2008 To 39-04-2009			

4	<p align="center"><b>Junior Research Fellow</b></p> <p>17- 10-2007 To 17.10.2008</p>	<p align="center"><b>Department of Science &amp; Technology, Govt of India, New Delhi, India.</b></p>	<p align="center"><b>“TIRUMALAS”</b> (Tirumala Landslide Mitigation and strategies)</p>	<ul style="list-style-type: none"> <li>i. Preparation of Various Landslide causative parameters maps Like Lithology, Geomorphology, Structure, Landuse/Landcover, Slope etc.</li> <li>ii. Preparation of landslide Incidence map</li> <li>iii. Landslide hazard zonation mapping using GIS</li> <li>iv. Landslides validation</li> <li>v. Suggesting suitable Landslide mitigation strategies</li> </ul>
5	<p align="center"><b>Junior Research Fellow</b></p> <p>15.09.2004 To 16.10.2009</p>	<p align="center"><b>Department of Science &amp; Technology, Govt of India, New Delhi, India.</b></p>	<p align="center"><b>“NILA”</b> (Nilgiri’s Landslide Mitigation through Remote Sensing and GIS)</p>	<p>Carry out Various new Landslide Vulnerability Zonation methods are being developed such as</p> <ul style="list-style-type: none"> <li>i. GIS based Slope mapping,</li> <li>ii. GIS based Integrated terrain model,</li> <li>iii. Information Value Method,</li> <li>iv. Weight of Evidence Method,</li> <li>v. Index overlay method and</li> <li>vi. Bureau of Indian Standards (BIS).</li> </ul> <p>Identifying the Best Method and minimum parameters required to evolve.</p>
6	<p align="center"><b>Project Trainee</b></p> <p>21. 08 .03 To 31. 03. 04</p>	<p align="center"><b>ISRO, Dept. of Space, Govt of India, Banglore, India.</b></p>	<p>Landslide Hazard Zonation Mapping in NE India”, a part of which submitted for partial fulfillment of my M.Tech degree.</p>	<ul style="list-style-type: none"> <li>i. Preparation of Various Thematic maps on Lithology, Structure, Geomorphology, Slope, Landuse / Landcover etc.,</li> <li>ii. Method 1 : Fuzzy membership functions were used to calculating the spatial relationship (information value) for each class.</li> <li>iii. Integration – Using Various Fuzzy Operators</li> <li>iv. Method 2 : Assigning Weightages and Integration Based on Index over lay method</li> </ul> <p>Comparison of Both Model</p>

### 4.3 INDUSTRIAL EXPERIENCE :

Periods	Organisation	Description of works and Responsibilities
1.04.04 to 14.09.04	Utility Automation Private Limited, Rohini, Delhi	<ul style="list-style-type: none"><li>▪ Creating and editing the utility datasets</li><li>▪ compilation of Maps</li><li>▪ edge matching the different state maps</li><li>▪ Quality checking</li></ul>

### 5. SPECIALIZATION

Geospatial Technology in Geology, Structure & tectonics and Geomorphology with special reference to Landslides

### 6. E-MAIL

[mmuthukumar1980@yahoo.co.in](mailto:mmuthukumar1980@yahoo.co.in)

[m.muthu.m@gmail.com](mailto:m.muthu.m@gmail.com)

### 7. RESEARCH GUIDENCE

#### 7.1 STUDENT RESEARCH PROJECTS GUIDED

SI. No	Name of the Student	Academic Year	Title of the Thesis
i)	S. Sekar (M.Tech.)	(2008-2010)	Geomatics Based Landslide Hazard Zonation Mapping, using unit area method in Parts of Nilgiris.
ii)	Sridhar (M.Sc.)	(2007- 2010)	Hyperspectral Remote sensing for mineral mapping in Parts of Salem.
iii)	S. Siva kumar (M.Tech.)	(2007- 2009)	Geoinformatics Based Landslide Vulnerability Assessment Using Weights of Evidence Method, Tirumala Region, Andhra Pradesh, India
iv)	K.Lakshmi Kanta Reddy (M.Tech.)	(2006-2008)	Geomatics Based Landslide Hazard Zonation Mapping, for Parts of Thirumala & Tirupati Hills, Chittoor District, Andhra Pradesh
v)	Sk. Mahammad Sartaj Basha (M.Tech.)	(2003- 2005)	Geospatial Technology for Soil Conservation measures in Hill ecosystem
vii)	S.Seethalakshmi (M.Sc.)	(2006- 2009)	Statistical Based Landslide Vulnerability Zonation Mapping Using Remote Sensing and GIS - A Part of Tirupati & Tirumala Hills Chittoor Dist,Andhrapradesh

viii)	S. Karthick (M.Sc.)	(2005- 2007)	Remote Sensing and GIS based Landslide Hazard Zonation in Parts of Nilgiris
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## 8. PUBLICATIONS (15 Nos.)

<b>8.1 In International Journals (1 Nos.)</b>	
15	Along with Ramasamy, SM., Kumanan C.J., and Nelakanntan. R(2008) GIS Based Slope Analysis for Landslide Hazard Zonation Mapping, Nilgiri Mountains, South India. International Journal of Geoinformatics vol. 4, No.3 S pp: 47 - 57
<b>8.2 In Refereed National Journals (7 Nos.)</b>	
14	Along with Ramasamy, SM. and Sreenivasulu. T. (2011) DEM wrapped FCC based Geomorphic mapping of Landslide Hazard Zonation for the parts of Nilgiris. Indian Society of Remote Sensing (In Press)
13	Along with Ramasamy, SM. (2011) DEM based Topographic analysis for Landslides Mapping and Mitigation Indian Society of Geomatics (in press)
12	Along with Ramasamy, SM and Neelakantan, R. (2011) Lineaments & Landslides Phenomenon in Nilgiri mountain India Indian Society of Remote Sensing (In Press)
11	Along with SM. Ramasamy, K. Palanivel, SK. Md. Sartaj Basha, K. Lakshmi Kanta Reddy, C.J. Kumanan and Bhoop Singh (2011) Geological Complexities, Landslide Vulnerabilities and Possible Mitigation, Tirumala hills, India. Journal in Indian Institute of Technology, Mumbai (In Press)
10	Along with SM. Ramasamy, Sk. Mahammad Sartaj Basha, & CJ. Kumanan (2009) Geomorphic Controls of Landslides, The Nilgiri Mountains, South India Journal of Indian Landslides, No.2 Vol.2 pp 35 - 40
9	Along with Ramasamy, SM. (2008) Geospatial Modelling of Geosystems and Landslides Mapping and Mitigation, The Nilgiri Mountains, South India. Journal of Indian Landslides, Vol.1 No.1 pp45-54
8	Along with Ramasamy SM, Mahammad Sartaj Basha SK & Kumanan CJ. (2008) Field based geological structures and landslides in nilgiris, south india - A GIS analysis Journal of Indian Landslides, Vol.2, No.1, pp 1-10
<b>8.3 Papers in conference proceedings (7 Nos.)</b>	
7	Along with SM. Ramasamy C.J. Kumanan K. Palanivel, and SK. Md. Sartaj Basha (2010) Geomatics Based Statistical Analysis for Landslide Hazard zonation mapping in Tirumala – Tirupathi Ghat road section, Andhrapradesh, South India, Natural Hazards and Climate Change.
6	Along with Ramasamy, SM., Nagappan, N., and Saravanavel, J (2007) Temple tanks of southeastern Tamil Nadu, India. Revival of lakes and water bodies

5	Along with SM. Ramasamy (2007) Remote Sensing And GIS Applications In Geomorphology For Landslide Hazard Zonation Mapping For Parts of Nilgiri Mountains, India, Geoinformation Technology for Natural Disaster Management
4	Along with Sk.Mahammad Sartaj Basha and SM.Ramasamy. (2007) DEM Based Topographic Analysis for Natural Disaster Mitigation in Hill Systems – A Study from parts of Nilgiris, India Recent Developments and Opportunities in Exploration Geology and Geoinformatics
3	Along with Neelakantan, R., Ramasamy, SM. and (2005) Lineaments and Landslides in Nilgiris. Geospatial Technology for Developmental planning, Allied Publisher pp: 233-239.
2	Along with Ramasamy, SM., Palanivel K., Nagappan N., and Gunasekaran, S. (2005) Asian Tsunami of December 26 (2004) and Its Possible impacts Over Hydrological Systems of Tamil Nadu Coast, India. The Indian Context. Allied Publisher pp. 201-212.
1	Along with Ramasamy, SM., Saravanel, J. and Nagappan. N. (2008) Nathiyin mael Karaikudi. Ariga Ariviyal, PP 30 - 32

#### 9. SEMINARS / CONFERENCE /WORKSHOP ATTENDED

Sl. No	Year	Conference /Seminar/Workshop
9	2010	Participated and presented paper along with SM. Ramasamy C.J. Kumanan K. Palanivel, and SK. Md. Sartaj Basha “Geomatics Based Statistical Analysis for Landslide Hazard zonation mapping in Tirumala – Tirupathi Ghat road section, Andhra pradesh, South India” <b>National Conference on Natural Hazards and Climate Change</b> during 11-13 March at Centre for Natural Hazards and Disaster studies, University of Madras, Guindy Campus, Chennai – 600 025.
8	2010	Participated (as a resource person)in the National Level workshop on <b>Geomatic based Natural Resources Disaster Mitigation and Managements</b> from 22 <sup>nd</sup> to 26 <sup>th</sup> Feburary 2010 held at Department of Industries and Earth Sciences, Tamil University, Tanjavur, Tamil Nadu, India.
7	2007	Participated and presented paper along with Sk.Mahammad Sartaj Basha and SM.Ramasamy. “DEM Based Topographic Analysis for Natural Disaster Mitigation in Hill Systems – A Study from parts of Nilgiris, India” <b>National Conference on Recent Developments and Opportunities in Exploration Geology and Geoinformatics</b> during 7-9 March at Periyar University in Salem.
6	2007	Participated and presented paper along with Ramasamy, SM., Nagappan, N., and Saravanel, J “ <b>Temple tanks of southeastern Tamil Nadu, India. Two day brain storming session on “Revival of lakes and water bodies”</b> at Centre for Advanced Studies in Remote Sensing, Bharathidasan University, Tiruchirappalli during 18-19 <sup>th</sup> December

5	2007	Along with SM. Ramasamy “Remote Sensing And GIS Applications In Geomorphology For Landslide Hazard Zonation Mapping For Parts of Nilgiri Mountains, India” <b>First International Conference and Workshop on Geoinformation Technology for Natural Disaster Management"</b> during 8-9 May 2007 in Esfahan Iran.
4	2009	Participated in the National Level Brain Storming Session in”Nano geosciences” Organised by Marine Science department Bharathidasan University, Tiruchirappalli during 20-21 <sup>st</sup> August.
3	2005	As a member, actively involved in organising the <b>“National Workshop on “NRDMS related Geospatial Technology for Develomental Planning”</b> held at Tiruchirappalli during 29 <sup>th</sup> -30 <sup>th</sup> July.
2	2005	As a member, actively involved in organising and as well as presented a paper in the Brain Storming Session on <b>“Tsunami Mitigation Strategies”</b> held at Tiruchirappalli during 25 <sup>th</sup> -26 <sup>th</sup> February.
1	2002	Participated (18-20 <sup>th</sup> September) the National Conference on <b>“IT Enabled Spatial Data Services – GEOMATICS 2002”</b> at Tiruchirappalli

#### 10. COUNTRIES VISITED

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#### 11. AWARDS & RECOGNITIONS

- 2nd Rank in M. Sc Degree Examination,
- 2nd Rank in B Sc Degree Examination
- District Level – Winner 2006, Boxing (81 – 91 Category)
- Regional Level – Winner 2007, Boxing (81 – 91 Category)
- NCC “B&C” certificate passed in “B” Grading ,
- NSS

#### 12. MEMBESHIP IN PROFESSIONAL BODIES

Name of the Society	Status of Membership
▪ Indian society of Geomatics	Life member (ISG-L-1221)
▪ Tamil Nadu Science Forum	Life Member

SIGNATURE