

# DR. MURALI KRISHNA GURRAM

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## SPATIAL INFORMATION TECHNOLOGY & DATA ANALYTICS AND MANAGEMENT APPLICATIONS PROFESSIONAL

### Theoretical & Applied Research & Field Experience

A dynamic, highly enthusiastic and motivated individual offering outstanding analytical, research, strategic-development/implementation, organisational, troubleshooting and managerial skills in the field of Spatial Information Technology and Applications in Urban, Natural & Environmental Management and Geoscience areas supported by a solid and successful 22 years record of accomplishment.

- ✓ Currently serving '*National University of Singapore*' as **Senior Research Faculty / Scientist – Geospatial Analytics** spearheading R&D in Spatial Data Analytics, Urban Environment, Climate Change, Public Health and Spatial Epidemiology.
- ✓ Worked as **Head, GIS Technology & Applications** at '*Xinthe Technologies*' and led the development of unique products for Real Estate, e-Governance, Urban, Environmental, Navigation and Mapping applications.
- ✓ Served '*COWI India*' at the capacity of **Assistant Vice President** and was full charge of Research & Development (R&D), Presales, Quality and Project Management.
- ✓ Full-charge of GIS Technology & Mapping & Environmental services which include, presales, project bidding, techno-commercial proposal development, presentations, etc.
- ✓ Successfully lead R&D operations at '*Navionics Technologies*' and played a crucial role in implementing open source at enterprise level. Instrumental in developing solutions for Navigation and Land base products.
- ✓ Was responsible for setting up of GIS Division at '*Roulac India Investment Advisory*' from scratch and made it success by delivering various investing, retail, real-estate and insurance projects of international reputation.
- ✓ Principal architect of Xinthe's [www.propertydreamz.com](http://www.propertydreamz.com) first of its kind portal developed for RealEstate sector using map analytics / intelligence for informed decisions. Instrumental in developing Roulac's place performance models, enterprise retail and Real-Estate site selection, WebGIS information products.
- ✓ Designed and delivered various agricultural productivity, commodity information mapping and GIS analytical applications for reputed clients.
- ✓ Key member of large-scale Photogrammetry and Municipal GIS project successful executed by '*Rolta India*' for Dubai Municipality.
- ✓ Expert in delivering real-time solutions for 'urban growth & risk & environmental quality, sustainable development, 'liveability indices', 'settlement dynamics', 'land use/land cover and climate change', 'cat modelling', 'natural resource management', 'watershed management', 'agro-ecological zoning', 'irrigation planning' 'disaster management', 'coastal wetland / river delta evolution and environmental change', 'coastal erosion', 'real-estate', 'retail-site selection', 'insurance', 'navigation', 'healthcare', 'infrastructure', '2D cadastre', '3D mapping (photogrammetry & LiDAR)', 'infrastructure / utilities (water, power, telecom) etc.
- ✓ Conceptualized various image-processing methodologies/algorithms for retrieval and analysis of spatial data from remote sensing data products such as IRS - LISS-III/LISS IV/IKONOS/World View etc.
- ✓ Got recognition as "Best Researcher" and ranked top among the group of internationally acclaimed GIS & Remote Sensing scientists for a pilot project on natural & environmental resource management from Centre for Space Science and Technology Education in Asia & Pacific (CSSTEAP), affiliated to United Nations.

### CAREER PROFILE

Organisation	Designation	Duration
National University of Singapore, Singapore	Senior Research Faculty / Scientist – Geospatial Analytics	Jul, 2019 to Till Date
Xinthe Technologies Pvt. Ltd., Visakhapatnam	Head, GIS Technology & Applications Development	May, 2014 to Apr, 2019
COWI India Pvt. Ltd., Gurgaon	Assistant Vice-President /R&D - Technology Processes & PreSales	Jun. 2011 to April, 2014
Navionics Technologies Pvt. Ltd., Hyderabad	Sr. Manager – Technical, R & D	Nov. 2009 to May, 2011
Castle Consulting India, Hyderabad	Sr. Consultant	Jun 2009 to Nov. 2009
Roulac India Investment Advisory Pvt. Ltd., Hyderabad	Sr. Manager (Sr. Place Analyst)	Apr. 2006 – May. 2009
Rolta India Pvt. Ltd, Mumbai, India	Sr. Executive	Jan. 2004 – Mar. 2006
Dept. of Geo-Engineering and RDT – Center for Remote sensing, Visakhapatnam	Research Fellow - GIS & Remote sensing	Jul. 2002 – Dec. 2003
Centre for Space Science Technology Education in Asia and Pacific, Affiliated to United Nations, DehraDun	Officer Trainee	Oct. 2001 – Jun. 2002

### ACADEMIC QUALIFICATIONS

- ⇒ **Ph.D.** Spatial Information Technology, JNTU, Hyderabad (2016).
- ⇒ **Doctorate** in Management Studies, IIBMS, Mumbai (2009).
- ⇒ **Executive Certification in Data Analytics**, IIM, Raipur (2019)
- ⇒ **MBA**, Sikkim Manipal University, Manipal (2010).
- ⇒ **M.Sc.-IT**, Kuvempu University, Shankarghatta, Shimoga (2009).
- ⇒ **M.Tech.** GIS & Remote Sensing, from Andhra University & CSSTEAP, affiliated to United Nations (2003).
- ⇒ **P.G. Diploma** GIS & Remote Sensing, CSSTEAP, affiliated to United Nations (2002).
- ⇒ **M.Phil.** GIS & Remote Sensing (Coastal Zone Management), Andhra University, Visakhapatnam (1999).
- ⇒ **M.Sc.** Geography, Andhra University, Visakhapatnam (1997).
- ⇒ **B.Sc.** Geoscience, Nagarjuna University, Guntur (1994).
  
- ⇒ **Certified Project Management Professional Programme**, IIT, Delhi. (2010)
- ⇒ **PMI's Certified Associate in Project Management (CAPM)**
- ⇒ **Qualified as Certified Reseller of Digital Globe's High Resolution Image (HRI) products.**  
\*\*Qualified CSIR/UGC, Govt. Of India NET - Lectureship with 4<sup>th</sup> Rank (2009) at national level.

### PATENTS

1. Intelligent System and Method of Digital Allocation of Ore Waste Zones, Gradation and It's Management; Patent Application No. 201841035851

### KEY EXPERTISE

#### Project Management & Lead:

- ⇒ Spearheading Urban Environmental, Climate Change, Public Health and Spatial Epidemiology applications @ NUS, Singapore.
- ⇒ Led Technology Development, Information Product, R&D and Business operations at Xinte Technologies.
- ⇒ Principal architect of Xinte's **PropertyDreamZ.com** an online real-estate portal.
- ⇒ As Chief Project Manager, lead different project teams of varied sizes ranging from 10 to 250 members.
- ⇒ Handled full charge responsibilities for evaluating and implementing business strategy with emphasis on plan, processes, technology architecture and project management.
- ⇒ Expert in business proposals, technical documents, project effort & resource estimates, client communication etc.
- ⇒ Instrumental in developing Automated Mapping and Municipal Management Systems.
- ⇒ Very good in vendor sourcing and management.
- ⇒ Highly skilled in providing strategic direction to team, in terms of its structure, process, metrics, skills, resource and communication plan.

#### PreSales Expertise:

- ⇒ Expert in analysing business requirements and preparation of Request for Proposals (RFPs) (Ex. for ICZM, NLRMP etc.) and thorough with project bidding processes.
- ⇒ Has expertise in solution architecture.
- ⇒ Extensively worked delivered various Proof of Concept (PoC) documents.
- ⇒ Very good in preparing and communicating marketing materials.
- ⇒ Has expertise in conceptualizing project life cycles and methodologies.

#### Business Development:

- ⇒ Has a great faculty in understanding and mapping client requirements.
- ⇒ Very good in liaising with Govt. and Ministerial officials at all levels for getting the necessary permissions. (DGCA, Ministry of Civil Aviation, Defence Ministry, Home Ministry etc.)
- ⇒ Enthusiast in building and maintaining business relationships with colleagues and clients.
- ⇒ Proactive in dealing with client for clarifying issues related to technology processes, products and services.
- ⇒ Has the ability to deal with strategic and sensitive issues
- ⇒ Brings clarity in objectives and reach agreement maintaining the interests of all parties.
- ⇒ Good in managing the proposal development process and maintain the time-lines for the proposal teams.

#### Application Architecture & Design:

- ⇒ Have expertise in WebGIS application architecture, design and specification requirement documentation.
- ⇒ Designed and developed various enterprise GIS solutions and products related to geodatabase development and management, distribution.
- ⇒ Conceptualized and developed various WebGIS information products for Real estate, Financial Market Potential Index and e-governance applications.
- ⇒ Excellent in GIS application development and customization methodologies.
- ⇒ Have sound knowledge in enterprise GIS application development.
- ⇒ Good in conceptualizing, designing, architecting and implementing innovative ideas.
- ⇒ Have application knowledge in UML and Software development methodologies.

#### Spatial Database Management:

- ⇒ Have excellent understanding of designing spatial data models according to application requirements.
- ⇒ Have hands on experience on working with open source database management software, such as, Postgre/PostGIS.
- ⇒ Experienced in handling ESRI geodatabases via ArcSDE.
- ⇒ Have application knowledge in GIS Data Modeling using E-R diagrams.

#### **Geographical Information Systems and Analysis:**

- ⇒ Fully abreast with various GIS aspects such as Geospatial data Extraction/Digitization, Data Conversion, QC/QA, Data Management, Data Integration, Analysis, Modelling, and Scenario Development.
- ⇒ Have around 11 years of experience in GIS Analysis, modelling applications.
- ⇒ Have excellent knowledge in Automated Mapping and Facility Management (AM/FM) Applications.

#### **Data Analytics:**

- ⇒ Very strong in conceptualising and implementing data analytics applications for diversified sectors. Good in market/retail potentiality, demand analysis, trend evaluation etc.
- ⇒ Expert in big data applications. Exceptionally good in data modelling, analysis, visualisation and reporting.
- ⇒ Taken strategic initiatives to create analytical roadmap for process automation for various projects.
- ⇒ Good in designing professional reporting and dashboard applications.

#### **Remote Sensing:**

- ⇒ Have sound knowledge in dealing with various remote sensing techniques such as satellite data processing, interpretation and extraction.
- ⇒ Expert in using various information retrieval algorithms for Optical, Infrared and Thermal remote sensing data acquired by different sensors such as DIGITAL GLOBE, LISS-II, LISS-III, LISS-IV, PAN, NOAA, OCM, LANDSAT, SPOT, IKONOS, SAR, RADARSAT, MODIS and Aerial photographs data etc.
- ⇒ Certified Reseller of Digital Globe's High Resolution Image (HRI) products.

#### **Digital Image Processing:**

- ⇒ Expert in various Image processing techniques such as georeferencing, mosaicking, masking, classification (supervised, unsupervised), change detection, DEM/DTM generation, noise removal, atmospheric correction, deriving Sea Surface Temperature, PCA, resolution merge, Layer Stacking etc.
- ⇒ Experienced in image processing techniques for the suspended sediment concentration (SSC), Chlorophyll concentration using IRS P4 Ocean Color Monitor (OCM) data. Also good in retrieval of Sea Surface Temperatures (SST) from the NOAA AVHRR data for the PFZ identification.

#### **Photogrammetry:**

- ⇒ Have 5 years of core experience in Digital Photogrammetry.
- ⇒ Handled all stages of Photogrammetry projects, which includes Aerial Triangulation, Soft copy stereo data compilation, QC, QA, integrating the 3D data in GIS environment, Map finishing OrthoPhoto generation and Technical report generation.

#### **Aerial Survey for Aerial Photography:**

- ⇒ Have complete operational experience on aerial survey operations, including documentation, procedure to obtain for flying permissions and leveraging with the concerned officials (as specified in NLRMP project).
- ⇒ Have sound knowledge about international vendors and clients with different 'aircraft' and 'camera' alternatives for different purposes of aerial survey.
- ⇒ Thorough with the GCP collection and DGPS / GPS survey procedures, also good in geodesy.

#### **LiDAR:**

- ⇒ Have sound knowledge in LiDAR technology and applications.
- ⇒ Proficient with LiDAR applications especially, LiDAR classification, DSM generation, Power line Corridor aping, Terrestrial LiDAR mapping, 3D CityModel generation etc.
- ⇒ Have thorough knowledge about LiDAR data acquisition instruments/sensors and mechanisms, such as, MMS, terrestrial LiDAR, industrial LiDAR, Altimetric LiDAR etc.

#### **CityGML:**

- ⇒ Proficient in creating 3D City Models using CityGML specifications.
- ⇒ Successfully designed, developed and delivered the 3D City Models of L-I and L-II generated using CityGML specification.

#### **Cartography & Mapping:**

- ⇒ Well versed with various cartographic techniques involved in various thematic mapping projects.
- ⇒ Experienced in both manual and digital map-making techniques.

#### **Data Quality Management:**

- ⇒ Have thorough knowledge in methods and tools for data quality management.
- ⇒ Good in defining and integrating methods for applications developed.
- ⇒ Have knowledge in automated testing using Win Runner, Test Director and Load Runner.

### **APPLICATION AREAS**

#### ***Urban / City / Municipal Applications:***

- Extensively worked on applications involving urban quality mapping, risk and growth potential evaluation.
- Have expertise in developing decision support models for generating liveability indices for urban areas.

- Experienced in developing spatial databases for urban management scenarios, maintenance and management.
- Successfully lead and delivered various urban utility mapping projects.
- Expert in urban sprawl mapping, site suitability, planning and sustainable development applications.
- Have hands-on-experience in developing municipal management systems and applications.

### **3D CityModel Development**

- Have expertise in generating 3D City models using CityGML specifications for urban planning, infrastructure mapping, virtual modelling etc.

### **Automated Mapping / Facility management (AM/FM):**

- Have sound knowledge of AM/FM projects and technology implications on e-governance.

### **Retail Site Selection:**

- Developed models for mapping retail market potentiality, marketing and distribution and competitor analysis.
- Developed site suitability analysis and growth-risk model for locating retail outlets.
- Well versed with consumer preferences and segmentation mapping.
- Good in customer networking and geo-intelligence analysis.
- Have knowledge in spatially enabling all retail stores for developing Supply Chain Operations Applications.
- Instrumental in developing Indoor Routing and navigation application for Xinte Technologies.

### **Real Estate:**

- Chief architect of the RE portal named *PropertyDreamz.com*, first of its kind in the world.
- Created various Growth-Risk potential models for the Real-Estate sector.
- Designed various real-estate site selection and suitability applications.
- Expert in real-estate market potential analysis.
- Trade area analysis, Gravity and Spatial Interaction Model Development.
- Experienced in Real estate land use / utility mapping and asset management.

### **Navigation / Transportation:**

- Have expertise in developing mapping applications for both 'land' as well as 'marine' systems.
- Architect of **navigation interface** (similar to Google Maps) using **Open Source** for PropertyDreamz.com.
- Expert in design, architecture and development of '**Indoor Navigation**' applications for Retail / Hospitality / Healthcare and many other domains.
- Have experience in developing data models and mapping data for navigation.
- Developed various models for mapping '**urban transportation efficiency**' by analysing, monitoring and measuring parameters like road & traffic conditions, crowd, walkability, navigability etc.

### **Agro-Business GIS Information Applications:**

- Worked on mapping projects involving agriculture productivity, pricing of agro-commodity and business volume.
- Delivered crop acreage and yield potential thematic maps based on the classification of various optical remote sensing image data products captured by sensors like IRS LISS-IV, III and WiFS.
- Conceptualised, designed and delivered various agro-business GIS information products for reputed clients across the globe.
- Authored monthly newsletters for businesses related to agricultural productivity, commodity and pricing.
- Experienced in land capability assessment, crop suitability modeling and agro-climatic categorization.
- Have command over mapping of crop phenology and pest infection studies.

### **GIS Modeling for Financial & Economic and Investment Analysis:**

- Well versed with Socio-Economic and financial data modeling using GIS technology.
- Experienced in GIS for various urban growth / risk assessment and management models.
- Have expertise in identifying place competitiveness with respect to various index parameters.
- Sound knowledge of Market Area Analysis, Business site suitability, Market Potentiality estimation etc.
- Conceptualised the market potential, growth / risk index models based on investment analysis.

### **GIS Economic Modeling for Place Performance and Investment Analysis**

- Have special expertise in place strategy and place performance evaluation.
- Good in growth-risk modeling of places.
- Have expertise in Spatial-Temporal Analysis of Economic Data Place Performance and Investment Analysis.

### **Environmental Impact Analysis (EIA):**

- Have experience in analysing weather extremes and its impact on sea level rise and coastal erosion.
- Extensively studied the coastal mangrove environments their degradation and cause and effective relations.
- Experienced in pollution impact analysis (air, water, noise & soil), hotspot identification and mapping.
- Expert in urban and land-water resource sustainability assessment and management.
- Extensively worked on the Environmental Impact Assessment (EIA) projects.

### **Disaster Management:**

- Strong in creating CAT (catastrophe risk) models for insurance domain.
- Expertise in developing impact assessment models for flood, cyclone, disease and pollution risk assessment.
- Good in modeling of urban growth-risk aspects with respect to industrial and demographic scenarios.

### **Natural Resource Management:**

- **Water Resource Management** - Experienced in identification and mapping of groundwater potential zones, drainage morphometry, micro-watershed modeling & management, erosion and Sediment Yield Index (SYI) mapping, irrigation planning, network mapping and management.
- Have expertise in interpretation, classification and mapping of Land Use /Land Cover at all 4 levels.
- Expert in evaluating and using the LU/LC data for planning and policy decisions.
- **Geomorphology and Bio geomorphology** - Have experience in interpreting, delineating, categorizing and mapping the geomorphology and bio geomorphology zones by analysing the remote sensing data.
- **Wetland & River & Coastal Zone Monitoring Studies** - Expert in remote sensing & GIS applications to Coastal Zone Management, Marine Remote Sensing and Environmental Management and Impact Analysis, Cause & Effect evaluation studies. Also expert in the aspects of coastal & delta landform evolution, coastal wetland degradation and microclimate changes, sedimentation analysis, near shore environ study (Turbidity and wave patterns).
- Fully abreast with Wetland Degradation Analysis, Mapping and Environmental Impact Analysis.
- Good in river erosion-accretion zone and hotspot identification and mapping.
- Developed semi-automated techniques for delineating land/water boundary in coastal and wetland zones. Expert in erosion/accretion modeling and using Digital Bathymetry Models for mapping the ocean/river/lake bathymetry.
- Have exposure to Potential Fishing Zone (PFZ) identification and mapping for forecasting.

**Geological Mapping and Mineral Resource Targeting:**

- Have hands on experience in targetting iron ore resource using ASTER data.
- Experienced in the identification and mapping hydrocarbon potential zones in river delta zones.
- Good in mapping geological formations.

**Micro-Climate Change and Environmental analysis and categorization:**

- Worked on the aspects of micro-climate change.
- Good at analysing climatic parameters using different techniques like, water balancing, drought categorization, climatic shifts and estimation of moisture, aridity and humidity indices etc.

**360° Panoramic Views**

- Have expertise in generating 360° panoramic views taken from different type of cameras.

**Use of GPS, Surveying and Geochemical Analysis:**

- Well versed with field techniques. Implemented GPS organisation methods for conducting survey for various features to obtain sub meter accuracy.
- Have expertise in survey, data collection (primary and Secondary), subsurface sample exploration, analysis etc.

**SOFTWARE PROFICIENCY**

Software Category	Product of	Product Name	Purpose of use	Proficiency
GIS	ESRI	ArcGIS / ArcGIS Pro	GIS Applications /Analysis	Expert
		ArcGIS Server	Enterprise / Web GIS Applications	Average
		ArcSDE	Geospatial Data Management	Good
	Open Source (OGC)	GeoServer/ Leaflet/ Open Layers/MapServer	Enterprise / Web GIS Application development	Very Good
	MapInfo	MapInfo 5.0	GIS Applications /Analysis	Very Good
	Intergraph	Geomedia		Very Good
	Open Source (OGC)	Quantum GIS, MapWindowGIS, GRASS, Diva GIS, fGIS, ZigGIS,		Expert
Data Analytics	Tableau	Tableau	Data Analytics & Visualization	Very Good
	Dash	Plotly		Good
CAD & GIS	Intergraph	Microstation 8.0	Data Extraction/Digitization	Expert
	Autodesk	AutoCAD		Good
	Microsoft	IntelliCAD		Good
Digital Image Processing & GIS	ERDAS	Erdas Imagine 8.x	Satellite image data processing, georeferencing, classification, DEM/DTM, Mosaicking, Raster analysis, Image Enhancements, Resolution merge etc.	Expert
	PCI	Easi/Pace 7.0.2		Very Good
	ITC	ILWIS 5.0		Very Good
	PCI	Geomatica 7.0	Marine navigation & mapping	Very Good
	SevenCS	ENC Designer		Very Good
	Bentley	IRAS-B	Raster data processing	Very Good
	Adobe	Adobe Photoshop	Image Editing	Very Good
Photogrammetry	Bentley Intergraph, Z/I	SocetSet, INPHO, Image Station SSK (ISFC, ISSD, ISDC, ISAE, ISAT, ISPM),	Aerial Triangulation, 3D feature capture, DEM / DTM etc	Expert
		Terrashare	Raster Image data Management	Very Good
OrthoPhotos	Bentley, Intergraph, Z/I	Orthopro, Orthovista	OrthoPhoto generation	Very Good
GPS	Garmin, Trimble	DGPS	Surveying, On field data capturing	Very Good

RDBMS	Microsoft	SQL Server 2017	Database Management, Analysis	Good
	Microsoft	Ms Access		Good
	Open Source (OGC)	PostgreSQL / Post GIS, MySQL	Geospatial Data Management	Very Good
Application / GUI Development	Microsoft / Google	C# .Net, Asp.Net	Applications / GUI development / Customization	Good
		Javascript		Good
		HTML, CSS	Web Development	Very Good
Markup Languages	W3C	XML, GML	Web development, data sharing	Good
3D City Modeling	Autodesk	CityGML	LandExplorer , 3DS Max	Very Good
Testing		SW Development	SDLC & STLC	Very Good
Office Management	Microsoft	MS Word, MS Excel, MS PowerPoint, Visio		Expert

### TRAININGS UNDERGONE/IMPARTED

Trainings Undergone	Trainings Imparted
<i>Centre for Space Science and Technology Education in Asia &amp; Pacific, Affiliated to United Nations</i>	Expert Lectures – Winter School PDP on Geospatial Technologies – Application to Science and Engineering Research (Geostap-2015), 19th December, 2015 to 08th January, 2016, GITAM University, Visakhapatnam
<i>Regional Remote Sensing Service Centre, (N), National Remote Sensing Agency, ISRO, Govt. of India.</i>	Course Coordinator, Geoinformatics Certification Course intended for the Engineers of Dept. of Irrigation, Govt. of Andhra Pradesh. (1 <sup>st</sup> Mar., to 15, Apr. 2003)
	Guided around 12 students for B.Tech. / M.Tech. / Ph.D. on Remote sensing & GIS Technology and applications for their project work on different topics.
	Delivered lectures on topics related to Geospatial Information technology and Applications in various reputed forums, universities and institutes.

### RESEARCH PUBLICATIONS

#### Book Chapters:

1. Murali Krishna G., and Nooka Ratnam K., (2019): Evaluation of Risk Potential of Industries and Natural Hazards in the Wards of Hyderabad, India - AHP Multi-criteria Modeling Perspective Using Remote Sensing and GIS; Proceedings of International Conference on Remote Sensing for Disaster Management; Springer Series in Geomechanics and Geoengineering, Springer International Publishing AG, part of Springer Nature 2019; Chapter No. 28, pp. 317-330; ISSN: 1866-8755.

#### Papers in International Journals:

1. Murali Krishna Gurrum and Nooka Ratnam Kinthada (2018): Remote Sensing and GIS based Study on Land Capability Assessment for Sustainable Crop Development in Sarada Basin, Visakhapatnam District, Andhra Pradesh, The Indian Geographical Journal, Vol. 93, No. 1 & 2, ISSN 0019-4824. Pp. 10-20.
2. Sairam Korada and Murali Krishna Gurrum (2018): A Geospatial Intelligence System for Digital Allocation of Feed and Waste Zones in Iron Ore Mining, Journal of Earth Sciences and Geotechnical Engg., Vol. 8, No.4, pp. 35-44, IF 1.84, ISSN 1792-9040 (print ver.), 1792-9660 (online ver.). IF 1.84, Georef, GoogleScholar.
3. Murali Krishna Gurrum and Nooka Ratnam Kinthada (2018): Influence of Demographic and Socio-Economic Variations in Shaping Urban Structure - A Ward Level Study on Hyderabad, Telangana using Remote Sensing and GIS Techniques. International Journal of Engineering, Science and Mathematics, Vol. 7, Issue 3, March 2018 (Special Issue), pp. 55-63, ISSN 2320-0294, IF 6.765, UGC, Scopus (ID: 3D9ED96C3EFA9FBD)
4. Naga Sai Sindhuja, V., Victor Babu, N., Ramesh Naidu, CH., and Murali Krishna Gurrum (2017): Watershed Preservation and Control Using GIS; International Journal of Engineering, Science and Mathematics; Vol. 6, Issue 8, No.1, pp. 266-268; ISSN: 2320-0294. IJMRA Publications
5. Murali Krishna G. and Nooka Ratnam K. (2016): Utility of Large Scale Photogrammetric Techniques for 3-D Mapping and Precision Iron Ore Mining in Open Pit Areas, Journal Geology & Geophysics, Vol. 6, No.1, pp. 270-274, IF 1.24, ISSN: 2381-8719, doi: 10.4172/2381-8719.1000270. Scopus, Google Scholar etc.
6. Yenamala Sreedhar, Arveti Nagaraju and Gurrum Murali Krishna (2016): An Appraisal of Land Use/Land Cover Change Scenario of Tummalapalle, Cuddapah Region, India - A Remote Sensing and GIS Perspective, Advances in Remote Sensing, Vol. 5, No. 4, pp. 232-245, IF 1.51, ISSN Print: 2169-267X, ISSN Online: 2169-2688. DOI: 10.4236/ars.2016.54019. Scopus, Google Scholar, I-Scholar, CrossRef, etc.
7. Murali Krishna Gurrum (2016): The Emergence of GIS – ‘Techno’pective Insights, Consultants Review Magazine, Vol. 2, Issue 8-4, pp. 34-35. Scopus, Google Scholar etc.
8. Murali Krishna G., Deekshatulu B. L. and Nooka Ratnam K. (2015): Urban Environmental Quality Assessment at Ward Level using AHP based GIS Multi-Criteria Modeling – A Study on Hyderabad City, India, Asian Journal of Geoinformatics, Vol. 15, Issue 3, pp. 16-29. IF 1.05, ISSN No. 1513-6728. SCI, Scopus, GoogleScholar etc.

9. Murali Krishna G., Nooka Ratnam K., Ravi, P. and Sridhar, P. (2015): A Holistic Approach for the Development and Implementation of Robust and Cost-Effective Enterprise WebGIS Business Solutions, *Journal of Geographic Information System (JGIS)*, Vol. 7, pp. 478-485. IF 1.05, ISSN Print: 2151-1950, ISSN online: 2151-1969. SCI, Scopus, Google Scholar, I-Scholar, CrossRef, etc.
10. Usha Ch., Murali Krishna G. and Nooka Ratnam K. (2015): Mapping of Soil Erosion Zones of Meghadrigedda Catchment, Visakhapatnam, India for Conservation - A Geospatial Approach, *International Journal of Geosciences*, Vol. 6, pp. 326-338, IF 1.23, ISSN Print: 2156-8359, ISSN Online: 2156-8367. Google Scholar, Scopus etc.
11. Nooka Ratnam K., Murali Krishna G., Amminedu E. and Venkateswara Rao V. (2014): Land Use/Land Cover and NDVI Analysis for Monitoring the Health of Micro-watersheds of Sarada River Basin, Visakhapatnam District, India, *Journal of Geology & Geosciences (JGG)*, Vol. 3, issue 2, pp. 146-153 IF 1.02. ISSN: 2381-8719. Scopus, GoogleScholar, CrossRef etc.
12. Murali Krishna G., Deekshatulu B. L. and Nooka Ratnam K. (2014): An Appraisal of Sustainability Scenario of Solid Waste Management: A GIS Study on Municipal Wards of Hyderabad, India, *Journal Geology & Geosciences (JGG)*, Vol. 3, Issue 2, 1000143, pp. 143-146, IF 1.02. ISSN: 2381-8719. Scopus, GoogleScholar, CrossRef etc.
13. Murali Krishna G., Deekshatulu B. L., Nooka Ratnam K. and Amminedu E. (2013): Evaluation of Change in Micro-Climatic Conditions vis-à-vis Urban Growth - A Remote Sensing and GIS Study on Hyderabad Urban Agglomeration, India, *Journal of Applied Hydrology (JAH)*, Andhra Pradesh Akademi of Sciences (APAS), Vol. XXVI, No. 1-4, pp. 105-123. Dec. 2013. IF 0.85, ISSN: 0971-670X. GoogleScholar, Scopus etc.
14. Murali Krishna G., Deekshatulu B. L. and Nooka Ratnam K. (2013): Air Quality Scenario Evaluation in the Municipal Wards of Hyderabad, Andhra Pradesh, India – AHP Based GIS Multi-Criteria Modeling Perspective, *International Journal of Urban Planning and Transportation (IJUT)*, Vol. 27, No. 2, pp. 1116-1125. IF 1.64, ISSN: 2051-5820. GoogleScholar, Scopus etc.
15. Murali Krishna G., Deekshatulu B. L. and Nooka Ratnam K. (2013): Assessment of Water Quality Scenario in Parts of Hyderabad Urban Agglomeration, India – AHP-GIS Modeling Perspective, *Int. Jour. of Civil and Envi. Engg. (IJCE)*, Vol.35, No.2, pp. 1147-1157. ISSN:1701-8285, IF 1.92. GoogleScholar, Scopus etc.
16. Nooka Ratnam K., Murali Krishna G., Amminedu E. and Venkateswara Rao V. (2013): Remote Sensing and GIS in the Geomorphometric Analysis of Micro-Watersheds for Hydrological Scenario Assessment and Characterisation - A Study on Sarada River Basin, Visakhapatnam District, India, *International Journal of Geomatics and Geosciences (IJGGS)*, Vol. 4, No. 1, pp. 195-212. IF 0.55, ISSN: 0976-4380
17. Murali Krishna G., Oyuntuya Sh. and Nooka Ratnam K. (2013): Influence of Micro-Climate Parameters on Natural Vegetation – A Study on Orkhon and Selenge Basins, Mongolia, Using Landsat-TM and NOAA-AVHRR Data, *International Journal of Advanced Remote Sensing and GIS (IJARSG)*, Vol. 2, Issue 1, pp. 148-161. IF 0.50, ISSN: 2320-0243. GoogleScholar, CrossRef etc.
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8. Hari Babu, P., Murali Krishna, G., Nooka Ratnam, K., (2011): Digital Mapping And Property Management Of Temples Using Remote Sensing And Geographical Information Systems - A Case Study, National Conference on "Development and Sustainability of Earth Resources and Environment (DSERE)" 12<sup>th</sup> to 13<sup>th</sup> March, 2011, AdiKavi Nannaya University, Rajahmundry, India.
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- Linear Shoreline Change Detection using Remote Sensing and GIS based Grid & Graph Analysis method – A study on Sagar Island, East Coast of India.
- Digital Mapping and Property Management of Temples using Remote Sensing and Geographical Information Systems - A Case Study.
- Remote sensing and GIS approach in the Identification of Optimal locations for the Establishment of Agricultural Marketing Yards – A case study in Guntur District of Andhra Pradesh”.
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#### **MEMBERSHIPS IN PROFESSIONAL BODIES**

- Life Member of Indian Society of Geomatics (ISG). Membership No. L-1360
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- Editorial Board Member, International Journal of Geoinformatics, Bangkok
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- IEEE and Geographic Activities, Member

#### **SEMINAR / SYMPOSIA PARTICIPATED**

- National Workshop on “Exploring the World through GIS” conducted by Dept. of Geo-Engineering, Andhra University College of Engineering (A), Visakhapatnam and Indian Society of Geomatics – Visakhapatnam Chapter, 14-15<sup>th</sup> November, 2018.
- National Conference on Geospatial Technologies for Sustainable Forests and Water Resources (GTSFW-2018), 21-22, Mar., 2018, organized by Dept. of Geo-Engineering and Centre for Remote Sensing, Indian Society of Remote Sensing (ISRS) and Indian Society of Geomatics (ISG) at College of Engineering (A), Andhra University, Visakhapatnam.
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- Geospatial India Forum, 10-12 Feb., 2015, Hyderabad.
- One Day Workshop on “Geospatial Technologies for Resources Evaluation and Disaster Management (GTREDM)” conducted by Dept. of Geo-Engg., College of Engg.(A), Andhra University, Visakhapatnam supported by Technical Education Quality Improvement Programme (TEQUIP), Phase-II on 22<sup>nd</sup> April, 2015.
- Geospatial India Forum, 22-24 Jan., 2013, Hyderabad.
- 13<sup>th</sup> ESRI User Conference 2012, 5<sup>th</sup> to 6<sup>th</sup> December, 2012, Radisson Blu MBD Hotel, Noida, Delhi NCR.
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- INPHO & e-Cognition Workshop 2012, jointly organized by Trimble Geospatial and Amigo Optima Solution Pvt. Ltd., 13<sup>th</sup> July 2012, New Delhi, India.
- India Geospatial Forum 17-19 Feb., 2012, Gurgaon, India.
- Emerging Technologies in Surveying, organised by TopCon Sokkia India Pvt. Ltd., Gurgaon, NCR Delhi, 09<sup>th</sup> December 2011.
- National seminar on “Development and Sustainability of Earth Resources and Environment (DSERE 2011), 12<sup>th</sup> to 13<sup>th</sup> March 2011, organised by School of Earth and Atmospheric Sciences, Adikavi Nannaya University, Rajahmundry, A.P., India.
- Canadian Geospatial Technology Partnership International Seminar, 18<sup>th</sup>, Jan, 2011, Hyderabad
- Geospatial World Forum 17-21 Jan., 2011, Hyderabad.
- MapWorld Forum 10-13 Feb., 2009, Hyderabad.
- International Seminar on Earth Observation Systems for Disaster Management – Capacity Building, Methods, and Challenges, IIRS Dehra Dun, 29-30<sup>th</sup> June, 2004.

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*Excellent References shall be provided on request*