

One-Day International Workshop on

## Free & Open Source Geospatial Engineering (FOSGeoE-2018)

**November 2, 2018**

*Convener*

**Prof. P. Jagadeeswara Rao**

*Sponsored by*

*Technical Education Quality  
Improvement Programme (Phase-III)*



**Organized by**

**Department of Geo-Engineering**

College of Engineering (A)

Andhra University

Visakhapatnam-530003

Andhra Pradesh

&

**OSGeo-India Chapter**

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Charter Member, OSGeo

#### *Co-Convener*

**Prof. G. Jai Sankar**

Head, Dept. of Geo-Engineering, AU

### **Guest Speakers:**

1. Prof. Venkatesh Raghavan, Osaka City University, Japan
2. Shri. Vundavalli Ravi Kumar, Secretary, OSGeo India
3. Prof. P. Jagadeeswara Rao, AU
4. Dr. D. Mukunda Rao, GITAM

### **Important Dates:**

Submission of Registration form: **31-10-2018**

Intimation to selected candidates: **01-11-2018**

Workshop Date: **November 02, 2018**

### **Registrations:**

Interested participants are requested to submit the registration form before 01-11-2018 through E-Mail ([pjr\\_geoin@rediffmail.com](mailto:pjr_geoin@rediffmail.com)) or by post. Selected participants will be intimated through E-mail or mobile phone.

*All Correspondence should be addressed to*

**Prof. P. Jagadeeswara Rao,**

Convener, OSGeo-2018,

Dept. of Geo-Engineering,

College of Engineering (A), Andhra University,

Visakhapatnam-530003

### **About Workshop**

This workshop intensive course aims to introduce participants to the fundamentals of data visualization using the OSGeo Live program and building towards the introduction of foundational spatially-centered approaches to identifying relationships and associations among population and environmental variables. The workshop emphasizes the use of open-source software packages and publicly available environmental and demographic data as an example of potential applications of these data with spatially centered visualization and analytic techniques. The workshop is comprised of 4 components 1) visualization, 2) geo-processing, 3) cluster analysis, and 4) relationship identification. Within each component, a lecture is followed by an opportunity to put the methods learned into practice.

GeoServer allows you to display your spatial information to the world. Implementing the Web Map Service (WMS) standard, GeoServer can create maps in a variety of output formats. OpenLayers, a free mapping library, is integrated into GeoServer, making map generation quick and easy. GeoServer is built on Geotools, an open source Java GIS toolkit.

There is much more to GeoServer than nicely styled maps, though. GeoServer also conforms to the Web Feature Service (WFS) standard, which permits the actual sharing and editing of the data that is used to generate the maps. Others can incorporate your data into their websites and applications, freeing your data and permitting greater transparency.

OSGeoLive is a self-contained bootable DVD, USB thumb drive or Virtual Machine based on Ubuntu that allows you to try a wide variety of open source geospatial software without installing anything. It is composed entirely of free software, allowing it to be freely distributed, duplicated and passed around.

### **About Andhra University**

Andhra University, established in 1926, with its sprawling campus overlooking the Bay of Bengal in Visakhapatnam, is one of the reputed academic institutions in India, offering 200 different courses in Arts, Commerce, Management, Science & Technology, Engineering, Law, Pharmacy and Education through its five constituent colleges, catering to the educational needs of the five coastal districts of the State of Andhra Pradesh, besides hundreds of students from other parts of India and abroad.

## About College of Engineering (A)

The College of Engineering, one of the five campus colleges, is a jewel in the crown of Andhra University consisting of 11 Engineering and 4 Basic Sciences departments, offering 17 Under-Graduate Engineering day-time programmes and 4 UG Engineering part-time programmes; 35 Post-Graduate Engineering programmes, 1 MCA and 3 M.Sc. programmes in various departments. All the departments are also running Ph.D. programmes in different fields of research. Accredited with very high ranking by NAAC and NBA, it has several Centres of Excellence in various specialized fields of research. These include International Center for Bioinformatics, Advanced Center for Nano Technology, Center for Biotechnology and Center for Phase Equilibrium Thermodynamics, Center for Energy Systems, Center for Condition monitoring & Vibration Diagnostics, Centre for Research on Off-Shore Structures and Center for Remote Sensing and Information Systems. The College of Engineering has been conferred autonomous status by UGC, and receives substantial funding through World Bank aided TEQIP.

## Department of Geo-Engineering and Centre for Remote Sensing

The Department of Geo-Engineering and Centre for Remote Sensing is an inter-disciplinary Department, involving in research in resource evaluation, disaster management, etc. using the modern geospatial technologies. The Department runs M.Tech. course in Remote Sensing, M.Tech. course in Geo-Engineering and a 4-year B.Tech. course in Geo-informatics Engineering.

## About Visakhapatnam

According to history, the city was named after the god of Velor-Visakha. It was a part of the Kalinga Kingdom, under Ashoka's rule in 260B.C. Visakhapatnam is a coastal city, popularly called "The jewel of the East Coast" and "City of Destiny" is in the state of Andhra Pradesh. It is located on the East Coast with beautiful beaches and hill ranges is a major tourist destination. There are a number of tourist places such as Simhachalam temple, Kailasagiri Hills, Submarine Museum, Dolphin's nose, Ramakrishna Beach, Ross Hill, Bheemunipatnam, ErraMattiDibbalu, ArakuHills, Borra Caves, etc.

## About OSGeo-India Chapter

Geographical Information Systems were seen as very special and very complex domain in India. There is a lot of hype attached with it and with that obviously high cost. So far such systems were seen as something to be used for high level planning and complex scientific operations by large corporates and Govt research agencies or departments only. This can be changed by the use of Free/Open source software tools. There is hardly any proprietary GIS software that can show text in Unicode standard in maps. This is significant since all government data and most educational institutions work in local language media. FOSS GIS has already shown this solution. Thus, Free/Open source Geospatial softwares which are much more powerful and usable can be used for developing systems where more and more public participation is sought. The OSGeo-India Chapter will strive to serve anyone interested in Open Source Geospatial Solutions and related issues, and to cover all the activities associated with the application, development and promotion of Open Source Geospatial solutions in the country.

## Themes of the Workshop

- Desktop GIS ( QGIS, GRASS GIS , gvSIG Desktop)
- Browser Facing GIS ( [OpenLayers](#), [Leaflet](#), [Cesium](#), [Geomajas](#), [Mapbender](#), [GeoMoose](#) )
- Web Services ([GeoServer](#), [MapServer](#) , [deegree](#), [ncWMS](#),
- Spatial Data Stores ([PostGIS](#), [SpatialLite](#) , [Rasdaman](#), [pgRouting](#),
- Navigation and Maps ([GpsPrune](#), [Marble](#) , [JOSM](#) )
- Spatial Tools ( [GMT](#), [R for Spatial Data](#))
- Domain Specific GIS ([zyGrib](#))
- Spatial Data Sets ( [Natural Earth](#), [OpenStreetMap](#) )
- Geospatial Libraries ([GDAL/OGR](#), [GeoTools](#) )
- Geospatial Standards ( [OGC](#) , [INSPIRE](#) )

Name:

Designation :

Organization:

Address for Correspondence:

Mobile No:

E-Mail:

Registration category:

(College/University Teacher/State/Central Govt. Official/Research Scholar)

Place:

Date:

(Signature of the Applicant)

## Sponsorship Certificate:

Certified that is a regular employee/research scholar of our institution since and is here by sponsored to attend the "Free & Open Source Geospatial Engineering ," at the Department of Geo-Engineering, AU College of Engineering (A), Visakhapatnam from November 2, 2018.

Place:

Date:

Signature of  
Head of the institution