**Suggested topics : REMOTE SENSING APPLICATIONS (DISATERS)
Paper title : APPLICATION OF HIGH RESOLUTION IMAGERIES FOR EARTHQUKE RISK REDUCTION OF MEGA CITIES
Author name : DR. BISWAJIT SARMA
Proposed presenter : DR. BISWAJIT SARMA
Mailing address : DEPARTMENT OF CIVIL ENGINEERING, JORHAT ENGINEERING COLLEGE, JORHAT -785007, ASSAM, INDIA
Phone: 91-9435052120, Fax: 913612234130, e-mail: iambiswajit@yahoo.com
Presenters Preference between oral and poster presentation: ORAL**

**ABSTRACT**

Integrated remote sensing and GIS technology plays an important role in the field of earthquake Disaster Mitigation and Management. With the increase in population, migration of people from rural areas to urban areas in search of livelihood and better economic perspective lead to rapid urbanization in many parts of India. The conversion of villages into towns, towns into cities and cities into mega cities is led by haphazard and unplanned developments in the construction of new buildings of various sizes and heights. The North East India is considered as a highly earthquake prone area of the country. The area has experienced two major earthquakes in the year 1897 and 1950 respectively and has suffered large scale destruction of properties and human life. The earthquake risk for different types of buildings will be different. Hence preparation of building stock inventory with their specific typologies marks the first phase of urban earthquake risk estimation and mitigation strategies. Since Guwahati, a mega city of the North east India having a population of 1.2 million contains 1,50,000 engineered and non engineered houses of different types, heights, ages and use of different materials, it is very difficult and cumbersome in creating the building inventory by physical survey. Application of High resolution satellite imageries help in creating building stock inventory not only by visual interpretation but also by the use of spectral classification of the multi spectral high resolution satellite data. Non homogeneous growths of buildings often create lots of difficulties in preparation of building clusters. In the present study, high resolution satellite data was used to create a building inventory database In the city of Guwahati of NE region of India. The integration of other ancillary data sets in GIS environment successfully demonstrates in the estimation of earthquake risk of the city.