



## SRINIVAS UNIVERSITY

College of Engineering and Technology,  
Mukka, Mangalore-574146,  
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## RESEARCH CENTRE FOR EARTHQUAKE RESISTANT STRUCTURES



### Mr. BHAVANI SHANKAR

As a branch of structural engineering, earthquake engineering has the purpose of mitigating the effects of seismic activity by developing procedures for the planning, analysis, and design of structures and facilities that are capable of resisting, to a preselected extent, the effects of earthquakes. In this broad sense, earthquake engineering covers the investigation and solution of the problems created by damaging earthquakes, and consequently the work involved in the practical application of these solutions, i.e. in planning, designing, constructing and managing earthquake-resistant structures and facilities. An earthquake engineer can be defined as a civil engineer specializing in earthquake-resistant design and construction and in the study of the effects of seismic activity. One of the main goals in Seismic Design is improving the understanding of earthquakes and their effects. Because of the complexity, unpredictability, and large magnitude of earthquake forces and the catastrophic consequences of earthquakes, earthquake engineering is a discipline that has evolved beyond the traditional establishment of principles and procedures for the planning, analysis, and the design of earthquake-resistant structures and facilities. In general, multi-storied buildings are usually constructed due to high cost and scarcity of land. In order to utilize maximum land area, builders and architects generally propose asymmetrical plan configurations. These asymmetrical plan buildings, which are constructed in seismic prone areas, are likely to be damaged during earthquake. Earthquake is a natural phenomenon which can generate the most destructive forces on structures. Buildings should be made safe for lives by proper design and detailing of structural members in order to have a ductile form of failure. The concept of earthquake resistant design is that the building should be designed to resist the forces, which arises due to forces acting on the structures.

Members:

1. Mr. Ravi Kiran
2. Mr. Dheekshith K

**Journal Publications:**

- Journal paper entitled “Comparative Study on Seismic Analysis of Soil Structure Interaction with Various Soil Properties by Varying Floor Levels” has published in International Research Journal of Engineering and Technology Volume 3 Issue 10 October 2016.
- Journal paper entitled “Comparison of Soil Structure Interaction for Regular and Irregular Buildings with Differing Floor Levels and Soil Stratum” has published in International Research Journal of Engineering and Technology in Volume 4 Issue 7 July 2017.
- Journal paper entitled “Study on Behavior of Diagrids under Seismic Loads Compared to Conventional Moment Resisting Frames” has published in International Research Journal of Engineering and Technology in Volume 4 Issue 8 August 2017.
- Journal paper entitled “Study on Effects of P-Delta Analysis on RC Structures” has published in International Research Journal of Engineering and Technology in Volume 4 Issue 8 August 2017.
- Journal paper entitled “Study on Concentric Steel Bracing at Soft Storey During Earthquake” has published in International Research Journal of Engineering and Technology in Volume 4 Issue 12 December 2017.
- Journal paper entitled “Comparative Study of Flat slab and Beam-slab System for a Multistoried RC building” has published in International Research Journal of Engineering and Technology in Volume 5 Issue 6 June 2018.
- Journal paper entitled “Seismic Analysis Comparison of Regular and Vertically Irregular RC Building with Soft Storey at Different Level” has published in International Journal of Emerging Technologies and Engineering, Volume 1 Issue 6, July 2014.