**PROJECT: EARTHQUAKE PREDICTION TECHNOLOGY.**

**ABSTRACT:**

Our Projects aims is to provide a technical insight into the sensors and systems used to monitor and forecast certain natural hazards. It describes the systems used to monitor and forecast earthquakes, tsunamis, hurricanes and tornadoes. The sensors used in these systems are considered in detail and some experimental techniques are also discussed. Numerous national and global systems are used to monitor and predict natural hazards. A wide range of sensors, together with radars and satellite-based techniques, play a vital role in these.

Many new techniques are under study and the most pressing need is for earthquake prediction. Earthquakes are the biggest natural nasties in terms of direct impacts on humankind and outbursts of seismic energy now pose a threat to around one third of the planet’s population. The threat is on the increase due to unrelenting population encroachment upon seismically-unstable lands.

 It is widely recognised that a significant degree of the damage earthquakes cause could be avoided given better forecasting and warning. Widespread automated earthquake warning response is in its early stages, but could prove as effective in saving lines as alarm systems that urge building evacuation.

For predicting seismic vibrations we should use a efficient sensor such as the **Omron D7S Seismic Sensor**. The D7S sensor has algorithm technology that gives high-precision measurement of spectral intensity, allowing the sensor to reject impulse vibration noise and respond only to genuine seismic activity. The sensor uses its three-axis accelerometer and Omron’s spectral-intensity value-calculation algorithms, to distinguish between seismic activity and other movem3ent. It has the same accuracy [as] a seismograph.

Each D7S features internal memory and I2C (I²C – inter-integrated circuit) interface designed to enable it to be integrated with IoT devices and smart meters, as well as features of the built environment such as bridges and flyovers that might take a hit from earthquake shocks. D7Ss are already used in Japanese buildings to monitor seismic activity and help prevent secondary disasters.

So, we will use this sensor in our project to predict EARTHQUAKES and lessen the catastrophic damage we are seeing around us.