

## **National Mineral Awards – 2007**

### **Disaster Management including scientific studies related to understanding and management of natural hazards such as underground mine hazards, earthquakes, landslides, floods and tsunamis**

Dr. Prantik Mandal, Scientist 'E-I', National Geophysical Research Institute, Hyderabad has carried out studies for enhancing the knowledge base on various parameters involved in the intraplate earthquakes occurring in India.

The seismic hazard assessment of Bhuj area by monitoring the aftershock activity in the region by Dr. Mandal has led to the identification of the North Wagad and Gedi faults that are not geologically explicit. His studies also provide the first estimates of sediment thickness and the site amplification maps that will be extremely useful for the earthquake disaster mitigation in this region.

Based on his research, Dr. Mandal proposed a model for the continued seismicity in the Koyna region that helped in short-term prediction of two events of magnitudes 4.2 and 4.8 in 2005-2006. He also modeled the intraplate stresses induced by topography, crustal density heterogeneities and an in-plane compression that may play an important role in controlling the occurrences of moderate size intraplate earthquakes in the Peninsular India.

In recognition of his outstanding contributions in seismic hazard mitigation due to the intraplate earthquakes in India, National Mineral Award - 2007 is conferred upon Dr. Prantik Mandal.