

# Workshop on Seismogenesis to PREDiction of Earthquakes: Himalaya and Indian Shield Perspective (SPRED-2009)

22–24 October 2009

to be held at

Wadia Institute of Himalayan Geology, Dehra Dun

## Scope

Strains resulting from the continued collision between Indian-Asian plates are manifested in a number of large earthquakes along the Himalayan and Burmese arc as well as in the Indian shield region. Over the last two decades seismology has undergone a rapid transformation in India with the installation of digital broadband seismographs (BBS) and real time data collection. This in conjunction with enhanced computing power has helped in the application of advance tools to quantify seismicity, earthquake source parameters, velocity structures, sub-surface medium characterization, seismotectonics and re-activation of fault zones. As a result, the knowledge about the structure and dynamics of the earth has improved dramatically, allowing deep understanding of plate dynamics, fate of subducted slabs, etc. The lithospheric architecture deduced from velocity images is integrated with complex surface geology to understand the evolution of the continental masses. The improved characterization of earthquake sources for large and moderate earthquakes in terms of fault geometry and rupture dynamics has opened up new vistas for tectonic studies. The long term forecasts of earthquake potential are now looking a possibility with improved knowledge of seismicity patterns. Parallel GPS campaigns have given more precise estimates on the strain budget, identifying likely zones of future large earthquakes. Also, strong motion records and ground amplification information are now available to the engineers for designing of safer earthquake resistant critical structures. These recent advances in our understanding of geodynamic processes, seismotectonic models, strain budgeting, multi-parametric precursors call for fresh stock taking to assimilate and decide future direction of research to identify potential zones of asperity/nucleation/locked segments that may define locations of future earthquakes. To make comprehensive assessment, a 3-day workshop on '**Seismogenesis to PREDiction of Earthquakes: Himalaya and Indian Shield Perspective**' (SPRED-2009) is planned at Wadia Institute of Himalayan Geology, Dehra Dun during 22–24 October 2009. It is expected that deliberations during the workshop will help in identifying vital knowledge gaps and provide direction to inter-disciplinary research. The workshop SPREAD-2009 shall cover the following themes:

- Seismogenesis of Indian sub-continent earthquakes;
- Real time data processing, automatic event detections: identification of active seismic regime;
- Deep sub-surface characterization using seismological and allied approaches;
- Advances in multi-parametric earthquake precursor research;
- Strain budget and geodynamic modeling;
- Seismic hazard in Himalaya and Indian shield

## Registration and Call for Abstracts

All those interested to participate in the workshop are requested to register on or before **17 August 2009**. Extended abstracts not exceeding 500 words (including diagrams) are invited on the focal themes. The abstract may be submitted through electronic mail in the MS word format or double-spaced typed copy on A-4 size paper, with a soft copy on CD. The abstract should include title, name(s) of the author and organization, address including e-mail ID, and should indicate the presenting author, and requested mode of presentation (oral/poster). Abstract may be submitted or forwarded to the Convener on or before 10 September 2009.

**Drs Naresh Kumar and Devajit Hazarika**, Conveners, 'Seismogenesis to PREDiction of Earthquakes: Himalaya and Indian Shield Perspective', Wadia Institute of Himalayan Geology, 33, GMS Road, Dehra Dun 248 001, Uttarakhand. Tel: (91) 135-2525474; Fax: (91) 135-2625212/2525200; e-mail: [spred2009@wihg.res.in](mailto:spred2009@wihg.res.in).

For further updates visit: <http://www.wihg.res.in>