

## Call for Papers – Thematic Issue on Earthquakes

Natural hazards have proved to be the most difficult enemy of mankind in this universe. This is owing to their ability to cause destruction on a large scale close to human settlements. Different natural hazards include hurricanes, floods, tornados, typhoons, famine, fires, landslides and earthquakes. Of all these hazards, earthquakes are different as their onset on human development originates below ground surface and may surprise even the most prepared nations by their unwarned and unnoticed arrival. This unique characteristic has made the earthquakes the most lethal and deadliest natural hazard that have caused devastation in terms of high number of human loss, wide spread building and infrastructure failures, and human sufferings.

Previous earthquake records reveal that some of the greatest earthquakes in the world with magnitude greater than 8.0 occurred in a short span of 50 years in the Indian Subcontinent. These include the Kutch earthquake of 1819 (8.3 magnitude), the Kangra earthquake of 1905 (magnitude 8.6), the Bihar-Nepal earthquake of 1934 (magnitude 8.4), the Assam-Tibet earthquake of 1950 (magnitude 8.7) and the Assam earthquake of 1997 (magnitude 8.7). Recently the Chile earthquake of 2010 (magnitude 8.8) and Japan earthquake of 2011 (magnitude 7.4) are a stark reminder of the devastations the earthquakes are able to cause. The lessons which have been learnt from the past earthquakes indicate that a proactive approach is required in order to mitigate their effects both on human beings and built environment.

In order to disseminate the latest developments, NED University Journal of Research plans to publish a Thematic Issue on *Earthquakes*. The issue will be published in **October 2012**. The aim of this Thematic Issue is to provide variety of perspectives on matters related to technological development and mitigation aspects of earthquakes. I would like to invite you and your colleagues to submit manuscripts based on studies that are theoretically sound and oriented towards practical aspects of energy related issues and their solutions. The deadline for submission of manuscript is **31 January 2012**.

Possible topics include, but are not limited to

### Earthquake Engineering

- o Earthquake-resistant construction practices
- o Non-engineered construction
- o Standardization of earthquake resistant design
- o Underground structures
- o Offshore structures
- o Performance based design
- o Analytical and numerical methods
- o Soil-structure interaction
- o Lifeline earthquake engineering
- o Seismic performance of historical structures

### Earthquake mitigation

- o Vulnerability assessment
- o Loss estimation
- o Human aspects of earthquakes
- o Disaster risk reduction
- o Techno-legal aspects of earthquake mitigation
- o Earthquake effects on environment
- o Passive control systems of earthquake mitigation
- o Active and semi-active control systems of earthquake mitigation
- o Base isolation systems

### Engineering Seismology

- o Analysis of strong ground motion
- o Earthquake prediction
- o Physics of fault systems
- o Characterization of active faults
- o Historical seismicity
- o Seismotectonics

### Geotechnical Earthquake Engineering

- o Soil liquefaction analysis
- o Earth-retaining structures
- o Dams and levees
- o Water distribution systems
- o Ground improvement techniques
- o Dynamic soil properties
- o Hazard analysis
- o Microzonation

The journal welcomes manuscripts from all parts of the world. Manuscripts should report on original research, or present an original framework related to previous research, theory and/or practice. Good quality case histories may also be considered for publication.

**Please note that all submissions will be subject to anonymous peer review by at least two expert reviewers. Selection at this stage does not guarantee publication of your work.**

Manuscripts should be submitted to the journal by email and submission procedure, and Guidelines to Authors can be found on the journal website at <http://www.neduet.edu.pk/NED-Journal>. Please note that there is no word limit to encourage authors to present their quality work.

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