International Conference
on
Earthquake Resistant Construction Practices

ICEQRCP 2012

July 27th and 28 th 2012

Dr. M.G.R. EDUCATIONAL AND RESEARCH INSTITUTE
UNIVERSITY Decl.u/s3,UGC
STRIVE TO EXCEL

Organised by

Department of Civil Engineering

Dr. M.G.R.
Educational and Research Institute
University
(Decl.U/S 3 of UGC ACT 1956)
Adayalampattu, Chennai - 600 095

In association with

Indian Concrete Institute — *The Master Builder* — *Institution of Engineers (India)*

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www.drmgrdu.ac.in/EQRCP2012/home.html

About the university

Dr. M.G.R. Educational and Research Institute University (Formerly Dr. M.G.R Engineering College) strives with the mission to impart quality technical education. Established in 1985 and having acquired deemed university status in the year 2003 under section 3 of UGC Act 1956, this university functions under Thirumathi Kannamal educational trust under the dynamic leadership of founder chancellor of the University Shri. A.C.Shanmugam, B.A.B.L, Ex M.P,M.L.A , Chairperson Mrs. S.Lalitha Lakshmi and the able administration of our president Er.A.C.S.Arun Kumar. The university is located on Bengaluru high way at a distance of 5 km from the Koyambedu Bus terminus and has been successfully conducting U.G/P.G Courses and research programs of various faculties of engineering and technology.

About the department

The department of civil engineering was established in 2002 and has been a part of the university since its inception. The department has grown over the years and is now recognized as one of the major engineering departments in the country. The department has developed strong links with various industries, academics and research, both within and outside the country. Besides high quality teaching and instruction for both UG and PG levels the department has organized various Conferences/ Symposium/Workshops at the national and international level. The Department of Civil Engineering with its multifaceted faculty continues to maintain and cultivate the talents among young engineers.

About the conference

The International Conference on earthquake Resistant Construction Practices aims to bring leading academic scientists, researchers and scholars onto a common platform to exchange and share their experiences and research results about Earthquake and construction practices and discuss the practical challenges encountered and the solutions adopted.

Conference Objectives

1. **To create awareness of various issues regarding seismic hazards, earthquake engineering education and social preparedness.**
2. **To improve the ability of civil engineering professionals in analysis, design and construction of earthquake-resistant structures through exposure of concepts and ideas.**
3. **To highlight the design guidelines provided in various methods of retrofitting and health monitoring of existing structures.**

Highlights of the conference

The problem of protecting the built environment in earthquake-prone regions involves not only the optimal design and construction of new facilities, but also the upgrading and rehabilitation of existing structures including heritage buildings. One of the most catastrophic earth quake occurred on January 26, 2001, India's 52nd Republic Day, at 08:46 AM local time (3:16 UTC) and lasted for over two minutes. The earthquake reached a magnitude of 7.7 and has caused a destruction of 3 lac houses and damaged 7 lac buildings, though all the Indian standard codes were in Practice (IS-4326) during 2001. The loss of life and property were mainly due to the ignorance of existing codes at the time of construction. Hence to create awareness among all the stake holders of the building industry, it is mandatory to follow such IS codes by satisfying the INTEGRITY AND DUCTILITY.

Integrity of the structure and ductility behavior under earthquake forces

INTEGRITY: The building to resist internal forces due to earthquake must be well connected horizontally by plinth beam, lintel beam etc. and should be connected vertically. The structural design must be like a box. The sloping roof should be well anchored taking the connection rods vertically down up to the foundation.

DUCTILITY: All components of a building undergo deformation under loads. When an earthquake strikes the building it gets distorted. Under moderate earth quakes there is no damage, during high intensity earthquakes the buildings undergoes more deformation beyond elastic limit and goes into plastic stage. By means of plastic deformation the earthquake energy can be dissipated and the buildings can withstand without significant loss of strength. This effect is called ductility.

Use of precast/prefabricated construction adoption of modular co-ordination

Another important objective of our "earthquake resistant construction practices" is to use building materials of improved properties like greater strength which assures quality and availability.

Forces during earthquake

The resulting lighter weight of the precast blocks attracts less internal forces during earthquake causing lesser inertial forces in the design of columns, shear walls etc. In addition to use of reinforced concrete in precast constructions. If pre-stressing also is used, it will result in additional reduction in depth and materials of construction.

Mass production

If mass production techniques are used in production, it will result in good quality control of the precast blocks with assured strength. One precast block occupies 8 – 10 bricks.

Conference topics

- ✓ Analysis and design of structures subjected to earthquake loads.
- ✓ Behavior & Design of reinforced concrete structures under earthquake loads.
- ✓ Symmetry of building.
- ✓ Avoidance of "soft storey" & design of "shear walls".
- ✓ Design of masonry and their behavior under earthquake loads.
- ✓ Behavior of steel structures (stacks) and long span bridges.
- ✓ Strengthening of structures.
- ✓ Repair and retrofitting of damaged structures.
- ✓ Testing in-situ strength of existing buildings to withstand cyclic loads.

Guidelines - abstract / paper submission

The soft copy of the extended abstract (not exceeding 300 characters) should be submitted before the deadline and the authors of selected papers will be intimated through email. The authors should kindly restrict their papers to EIGHT A4 pages including text, figures, tables and references. It should be typed in single column with single line spaces, Times New Roman with font size 12. The authors can mail the papers to eqrcp2012@gmail.com

Important Dates

Submission of extended abstract	2nd June 2012
Intimation of acceptance	10th June 2012
Submission of full paper with Registration Fee	2nd July 2012

Registration

Registration should be made in advance by paying suitable fee as demand draft/cash in favor of 'Dr. M.G.R. Educational and Research Institute' payable at Chennai. Foreign delegates can also pay the equivalent Indian rupee at the conference venue.

Category	National	International
Industries /R&D Organizations	Rs. 2000	$ 200
Academic Institutions	Rs. 1500	$ 175
Students/Research Scholars	Rs. 1000	$ 125

Accommodation

Limited accommodation will be provided close to the conference venue on priority basis. Foreign delegates are requested to confirm their requirements and need for transport at the earliest.

Proceedings

All the accepted papers will be published in the conference proceedings, and the lead papers will be communicated to International journals for publication.

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