



VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING & TECHNOLOGY



DEPARTMENT OF CIVIL ENGINEERING

**A Report on International Conference on “*Emerging Trends in Civil Engineering*”
(ICETCE-2014) 6th - 8th January 2014 Under TEQIP – II**

THEME OF THE CONFERENCE:

The research scenario of Civil Engineering is tremendously changing with latest trends emerging in all the streams. Studies on improving concrete properties, rehabilitation of existing structures, structural optimization, Computer Aided Analysis and design using Finite element Analysis are of growing importance. Climate changes and its impact on changing water levels, economy and future as a whole need to be focused. Growing global warming and effects of urbanization on the environment need to be addressed.

The main objective of the Conference is to provide a forum for the discussion of research results, new developments and novel concepts in the fields of Civil Engineering thus paving way for the researchers to explore the latest trends. The Conference focuses on bringing together the researchers, professionals and scientists from R&D and educational institutions across the globe to share their views and recommendations. The Conference encased the following themes

- Recent Advances in Reinforced Concretes
- Construction Management
- Materials and Techniques for repairs, Rehabilitation and sustainability
- Structural Analysis
- Sustainable water resources and planning
- Impacts of climate changes on water Resources Management
- Urban Hydrology including storm water Management, Coastal Hydraulics
- Geo-Technical Engineering
- Economics, Planning, Design and Management of Transport systems
- Intelligent transport systems
- Disaster Management
- Water and Air Pollution
- Remote sensing &GIS

CONTENTS OF THE CONFERENCE

The conference received tremendous response from the authors across the country and around the globe. We have received 93 technical papers including 8 keynote papers from eminent international researchers Dr. V Rama Krishnan, Professor, south Dakota, USA, Dr. Geiger, Germany, Dr. Indubhushan patnaikuni, Australia, Dr. Fang fwa, Singapore, Dr. B. Vijaya Rangan, Australia, Dr. V S Parameswaran, Chicago, Prof. M R Madhav, India.

The conference technical sessions started with a graceful keynote address on “**Development of New Construction Materials for structural use**” by Dr V Ramakrishnan, Regeants distinguished professor South Dakota school of Mines & Technology. He has highlighted on the use of corrosion free basalt fiber composite rebars as reinforcement for concrete.

The keynote address of technical session -1 highlighted the durability studies of basalt fibres in concrete by Dr. Indubhushan patnaikuni from RMIT, Australia

The session was chaired by Prof. N Murali Krishna of OC Engineering hyd. The session also showcased the research on Lateral Load Distribution In Nonlinear Static Procedures For RCC Building, Dynamic Sensitivity Analysis of Structures Under Discrete Damaging Incidents, A Study on the Effect Of Fiber Orientation on Simply Supported Laminated Plates, Performance Study of Joints in Honey Comb Sandwich Panels Used In Light Weight Construction; Integrated Shape and Topology Optimization of Cylindrical Shells, Integrated Shape and Topology Optimization of Cylindrical Shells, Effects of Openings In Shear Wall on Seismic Response of Frame-Shear Wall Structures.

In TECHNICAL SESSION -2 keynote LECTURE was presented by Prof Geiger on Urban Storm Water Management trapped by manmade and natural changes

The session consisted presentation of papers on Assessment of Dissolved Pollutants In Krishna River Using Mass Balance Approach, Inverse Modeling to Soil-Water And Solute Movement Parameters, Inverse Modeling to Soil-Water And Solute Movement Parameters, Multi Electrode Resistivity Survey for Characterisation of Hard Rocks, Multi Electrode Resistivity Survey for Characterisation of Hard Rocks, Sea Water Desalination using Cost Effective Technologies

In TECHNICAL SESSION -3 keynote LECTURE was presented by eminent International expert in precast and prestressed concrete by Dr. V S Parameswaran on Materials and Techniques for Repair & Rehabilitation of Concrete Structures

and in session -5 Dr.B Vijaya Rangan Professor, Curtin university, Australia Expertise in Geopolymer concrete addressed with his keynote on Geo polymer Concrete Applications.

The papers in these two sessions showcased interesting research in the emerging trends in concrete studies and new alternative materials which are the need of the Sustainable development. Bio inspired solutions, Porosity and Permeability Studies on Magnetic Water Concrete, Studies on Bamboo as Reinforcing Material in Concrete Beam, Light Weight Aggregate Concrete replacing Conventional Aggregate with LECA etc

In session – 4 Professor M R Madhav,visiting professor,JNTUH and Professor Emiritus,IIT,Hyd delivered a key note on Pullout in inclined inextensible reinforcement in Reinforced soil wall and the session included the presentations on

Soil Structure Interaction of Building Frames Supported By Foundations, Dynamic Analysis of RCC Cantilever Retaining Wall with Different Parameters, Dynamic Analysis of RCC Cantilever Retaining Wall with Different Parameters, Analysis of Earth Reinforcement Elements Using Finite Element Method, Studies on Impact of Industrialization on Soil Quality Using Remote Sensing and GIS- A Model Study etc.

In session – 6 Professor Indubhushan Patnaikuni, Australia delivered a key note on Critical issues during the concession review of studies on public–private partnership projects.The session discussed various possible new techniques in Project management like Multiple Decision Making Models, pestel analysis etc.

In session – 7 Dr.T. F. Fwa,Director, Centre for transportation & Professor, National University of Singapore delivered a key note on Integrated Highway Infrastructure Management System. The session had discussions on Comparative Study on Strength Characteristics of Soil Stabilized Pavement by Using Flyash, Restoring Culture, Belief's and Heritage in Development of Sustainable Infrastructure, PRT System, Analysis for Motorbike Accident on Helmet Wearing in Selected Stretches of Hyderabad City, Goods Travel Demand Estimation Roller Compacted Concrete Pavements for Rural Roads in India etc.

In session – 8 Dr. Ramakrishnan presented a keynote on Global Warming and Sustainability issues as related to Concrete Technology, On behalf of

Dr.V.M. Malhotra from Natural Resources Canada, CANMET, Ottawa, Canada

The session resulted discussions on Earthquakes-Oceans-Tsunamis-Coastal Zone Management, Refurbishment of Existing Buildings for Energy Saving, Stratigraphic Status of the Koderma

Mica Belt, North-Eastern Seismic Status and Mitigation Requirements, Studies on Aquifer Characteristics in Mathadi Vagu Basin , Zero Waste Management & Treatment Technologies for Brewery Effluents- A Case Study of M/S.United Breweries Limited,etc.

On the whole the three days were tremendous brain storming sessions on the research results presented by various researchers across the globe and various parts of the country. I hope the authors have noted the suggestions given by the chair persons to proceed in the right directions.We have contributions from authors from MIT,Manipur, Orissa, NIT Rourkela, Maharashtra, Kerala, Tamilnadu, Karnataka, Bangalore, BITS, Pilani Rajasthan and from various parts of Andhra Pradesh.

It is understood from the feedback of all the participants that all the technical sessions were very informative and the keynote addresses were appreciated by the participants, authors and the faculty. We thank the Management, Principal, TEQIP – II for their constant encouragement and valuable suggestions given in organizing this Conference successfully.

Dr.A.Mallika
Organizing secretary

Dr. B.N.M. Rao
HOD – CE