

# **Annual Report 2010-2011**

## **Department of Civil Engineering**

### **Introduction**

The Department of Civil Engineering with its multifaceted faculty continues to maintain and cultivate its strong links with the building and construction industry and academic and research institutions both within and outside the country. Besides high quality teaching and instruction at both UG and PG levels, the Department is actively involved in basic and applied research and consultancy and provides high quality technical advisory support through various R & D projects and consultancy to various organizations. The department has attracted significant amount of sponsored research funding from government and private agencies.

### **Academic Programmes**

The Department of Civil Engineering offers broad-based undergraduate B.Tech degree programme. A dual degree (B.Tech-M.Tech) programme is also run in structural engineering. Postgraduate M.Tech (admissions through GATE/sponsorships) and PhD (through selections/ sponsorships) programmes are offered in the following five specializations:

Geodesy and Remote Sensing  
Geotechnical Engineering  
Structural Engineering  
Transportation Systems Engineering  
Water Resources Engineering

This year, 61 M.Tech and 18 PhD students were admitted in the above specializations. In the first year, 101 students were on rolls in the B.Tech, 16 in the dual degree B.Tech/M.Tech programmes. The students graduated from the Department are as follows:

<b>Degree Awarded</b>	
B.Tech.	: 71
M.Tech.	: 36
Ph.D.	: 17
Dual Degree	
B.Tech.	: 20
M.Tech.	: 20

## **Significant Awards / Distinctions**

### **Bajoria k.M.**

Appointed as chairman of Indian ASTR (Association of Structural Rehabilitation)

### **Choudhury D.**

APACM Award for Young Investigators in Computational Mechanics – 2010, The Asian Pacific Association for Computational Mechanics (APACM), Sydney, Australia, July 2010.

U. P. Government National Award – 2010, Indian Society for Technical Education (ISTE), New Delhi, India, December 2010.

Elected as Honorary Secretary of Technical Committee TC 212 on Deep Foundations for 2010 – 2013, International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), London, U.K., June 2010.

### **Dasaka, S.Murty**

*Patent:* **Dasaka, S.M.** and Trudeep N. Dave: A triaxial geocomposite testing apparatus for simultaneously calibrating multiple pressure transducers, Indian Patent Application No 223/MUM/2011, Filed on 25 January 2011.

**Jothiprakash, V.**

*The Union Ministry of Water Resources: Department of Irrigation Prize by Institution of Engineers (India) for the paper published in Civil Engineering Division, during the 25<sup>th</sup> Indian Engineering Congress, Kochi, 17<sup>th</sup> Dec. 2010.*

**Subimal Ghosh**

*The outstanding reviewer award for Journal of Hydrologic Engineering, American Society of Civil Engineers (ASCE), 2010.*

*BOYSCAST Fellowship 2010 from Department of Science and Technology, Government of India for carrying out research related to climate change in Oak Ridge national Laboratory, TN, United States of America.*

**Singh, D.N.**

*Fellow, Indian National Academy of Engineering (INAE), New Delhi.  
Fellow, American Society of Civil Engineers, ASCE*

**R&D Activities**

**Sponsored Research**

<b>Sponsored Research Projects :</b>	
New	: 10
Ongoing	: 48
Completed	: 9
<b>Faculty Involved</b>	<b>: 27</b>

Department received 10 new sponsored projects with a sanctioned outlay of Rs. 2,05,74,596. A list of sample of new and on going sponsored projects is as below:

<b>Project Title</b>	<b>Sponsoring Agency</b>	<b>Status</b>
Behaviour of shallow footings subjected to underground and overground blast loading	DST	Ongoing

Development of a New Methodology for Determining Distribution Coefficient ( $K_d$ ) for Radionuclides in Soils	BRNS	Ongoing
Integrated Flood Assessment Modeling for Urban Watershed Using Finite Element method, GIS and Remote Sensing	DST	Ongoing
Hydraulic Model Investigations for Design of Raft Foundations for Bridges”, Ministry of Shipping, Road Transport & Highways	Ministry of Shipping, Road Transport & Highways	Ongoing
Development of Reliability Based Guidelines for the Design and Flaw Evaluation of Nuclear Piping System	BRNS, DAE	Ongoing
Affordable Urban Modular Residential Buildings in Steel in India	Arcelor Mittal R&D, Belgium	Ongoing
Evaluation of Coal ash as a landfill liner material for waste containment systems	DST	Ongoing
Risk of clay liner cracking and environmental hazard	IFCPAR	Ongoing
Dynamic properties of soils of Mumbai region: pilot study	MoES	Ongoing
Stresses and deformation of tunnels subjected to earthquake loading	DST-NSC	Ongoing
Second generation area traffic control system	DIT, Gov. of India	On going
Real-time transit route information and Trip planner	DIT, Gov. of India	On going
Real time traffic counting and monitoring station	DIT, Gov. of India	On going
Development of the Virtual Laboratory on Traffic Engineering	MHRD	On going
Development of the Web based course Traffic Engineering and Management	NPTEL	On going

## **Consultancy Work**

274 consultancy projects worth about Rs. 9,15,59,290 were undertaken during the year by the Civil Engineering Department. 23 faculty members were involved in the above consultancy work.

## **Extension Activities**

In order to encourage and facilitate interaction amongst practitioners and researchers, the following activities were organized:

## **Conferences and Workshops**

Indian Geotechnical Conference (IGC – 2010), GEOTrendz, December 16 – 18, 2010. (Organizing Secretary: B.V.S. Viswanadham, Joint Organizing Secretaries: Dasaka, S.Murty and Deepankar Choudhury)

International Symposium on Forensic Geotechnical Engineering, IIT Bombay, 14-15 December, 2010. (Organizing Secretary: Dasaka, S.Murty and B.V.S. Viswanadham).

Ninth International Workshop on Transportation Planning and Implementation Methodologies in Developing Countries (TMPDC), Mumbai, India, December 15-17, 2010 (Organized by Transportation Systems Group)

ATC-18 *International Workshop on Mega Foundations: Recent Advances on large and deep foundations*, September 16, 2010. (Organizing Secretary: Juneja A)

Organized *Research Scholars' Confluence: 2010* on Nov 13, 2010. (Organizing Secretary: M.C. Deo)

Organised International workshop on CORFU-“Collaborative Research on Urban Flooding” at IIT Mumbai under FP7 EU Research Programme, 4-5 February 2011. (Organizing Secretary: Gupta Kapil)

## Short-Term and CEP Courses

QIP & CEP Course “Climate Change and Water Management”, held during 28 February – 4th March 2011 Oct. 12-16, 2009 (**Prof. Subimal Ghosh & Prof. Eldho T.I**)

CEP Course (Open), on "Urban Drainage Management- State-of-the-Art" IIT Bombay, 2-4 September 2011. (**Convener: Prof. Kapil Gupta**)

An in-house CEP course entitled “Urban Transportation Modelling System” was conducted for the planners and engineers from the Planning Division of Pune Municipal Corporation during January 11-13, 2011. (**Convener: Prof. KVK Rao**)

CEP-QIP short-term course on “Risk Assessment and Management in Geotechnical Engineering”, at IIT Bombay, March 14-18, 2011. (**Convener: Prof. Dasaka S. Murty**)

Five days CEP/QIP course on Advances in Geotechnical Engineering (April 12-16, 2010) (**Convener: Prof. Juneja A**)

QIP Short Term Course on “Innovations in Traffic Flow Modeling” 05-09 July 2010, Indian Institute of Technology Bombay. (**Convener: Prof. Tom V Mathew and Prof. P. Vedagiri**)

## Visitors to the Department and their presentations

<b>Name and Affiliation</b>	<b>Date</b>	<b>Lecture Topic</b>
Dr Ji Chen, Department of Civil Engineering, The University of Hong Kong, Pokfulam, Hong Kong, China.	8th July 2010	Observed climate change and urbanization effects on regional climate in south china
Prof. Schwing, Karlsruhe University.	15th July 2010	Soil Nailing in Germany

Dr. Jeremy Blum, Assistant Professor of Computer Science at the Penn State University, Harrisburg.	9th August 2010	Agent-based optimization of transit route network design
Vikrant Vaze, Doctoral candidate at the Massachusetts Institute of Technology (MIT)	23rd August 2010	Game theoretic models of airline frequency competition for airport congestion mitigation
Mr. C.M. Dordi, Vice President (Technical Services), Ambuja Cements Ltd.	27th August 2010	Future challenges for young civil engineers
Prof. Saman Bandara, University of Moratuwa, Sri Lanka	3rd September 2010	Assessing accessibility and connectivity of nodes of transportation networks under disaster risk
Prof. Jyant Kumar, IISc Bangalore.	8th October 2010	Limit analysis with finite elements: applications in geomechanics
Dr. Nitesh Chawla, Assistant Professor in the Department of Computer Science and Engineering at the University of Notre Dame.	19th October 2010	Data mining algorithms for climate sciences
Prof Dimitris Tsamboulas, National Technical University of Athens.	22nd October 2010	Evaluation and impacts of transport infrastructure projects
Dr. Jitendra Bajpai, Area Director, World Bank	11th January 2011	Transport in development: a world bank perspective
Prof. Musharraf Zaman, University of Oklahoma.	14th January 2011	Field performance of asphalt pavement containing mine tailings
Prof Jose Manuel Viegas Professor of Transportation	18th January	Revisiting some of the fundamentals of transport

Systems, IST, Lisbon.	2011	modeling: Optimizing Transportation Analysis Zones and getting rid of them
Mr. Deepak raj, General Manager Keller India	5th March 2011	Ground improvement techniques for various infra-structure projects
Mr. Sudhir P Badami, Chief consultant, Mumbai	5th March 2011	Setting right priorities for mumbai transportation
Ms. Alpa Sheth Managing Director, VMS Consultants Pvt. Ltd.	6th March 2011	State of practice of structural design engineering in India.

### **Participation in Conferences/Symposia/Workshops/Seminars**

#### **Bajoria, K. M.**

Sixth International Engineering and Construction Conference, American Society of Civil Engineers, Egypt, 28-30 June 2010.

#### **Chandiramani, N. K.**

Participated, presented paper, and chaired session on Vibration Control in 6<sup>th</sup> *International Conference on Vibration Engineering and Technology of Machinery (VETOMAC-VI)*, IIT Delhi, December 13-15, 2010, New Delhi.

Participated, presented paper, and chaired session on Noise and Vibration Suppression and Control in *17th International Congress on Sound and Vibration*, paper 441, July 18-22, 2010, Cairo. Another paper presented by co-author (PhD student).

#### **Choudhury, D.**

Participated and made oral presentation of two technical papers in *GeoFrontiers-2011, Annual Congress of the Geo-Institute of ASCE*, March 13-16, 2011, Dallas, Texas, USA organized by GI-ASCE.

Participated and delivered Keynote Lecture at *National Conference on 'Landslide Hazard, Consequences and Challenges'*, 10-12 February, 2011, Central Building Research Institute (CBRI), Roorkee, India.

Participated and presented a technical paper in *BGC – 2010*, Bangladesh Geotechnical Conference of the Bangladesh Geotechnical Society, Dhaka, November 4 – 5, 2010.

Participated and delivered Plenary Lecture at *1st International Conference on Disaster Prevention Technology and Management (DPTM-2010)*, 23-25 October, 2010, Chongqing, China.

**Deo. M.C**

Attended *Water-2010* conference at Quebec, Canada during July 5-7, 2010

Attended *Ninth International Conference on Hydro-Science and Engineering*, ICHE 2010, IIT Madras Aug 2-5, 2010

Attended *Hydro-2010* conference at Mullana, December 16-18, 2010.

**Eldho, T.I.**

Participated and Chaired a Session in Int. Conf. “*An International Perspective on Water Resources & the Environment*”, National University of Singapore, January, 4-6, 2011.

Participated and Chaired a Session in *Ninth International Conference on Hydro-Science and Engineering*, held at IIT Madras, Chennai, India on August 2-5, 2010.

*Second International Conference on Coastal Zone Engineering and Management (Arabian Coast 2010)*, Sultan Quabooz University, Muscat, Oman, November 1-3, 2010

**Gopal R Patil**

Attended 90th Transportation Research Board Annual Meeting, Washington, DC, January 2011.

Attended a workshop, Accelerated Commercialization of Technology and InnoVation (ACTIV), organized by AcceleratorIndia (UK) and Venture Center (India) in Pune, India during September 30 and 1st October 2010

**Ghosh S**

Participated and presented a poster in the 9<sup>th</sup> US National and 10<sup>th</sup> Canadian Conference on Earthquake Engineering, Toronto, Canada, July 25-29, 2010.

Participated and presented a paper in the 14<sup>th</sup> Symposium on Earthquake Engineering, Roorkee, India, December 17-19, 2010.

Participated and gave a talk in the 2<sup>nd</sup> Annual AFRRE Meeting, Kharagpur, India, March 21-22, 2011.

Participated and chaired a session in the *International Conference on Post-Disaster Reconstruction* on the 10<sup>th</sup> Anniversary of Bhuj Earthquake 2001, Gandhinagar, India, April 14-16, 2011.

**Janga Reddy, M.**

Participated in a National Workshop on “Geo-Statistics & Soft Computing Techniques for Spatial Data Management” and delivered an invited lecture on “Multivariate Frequency Analysis of Droughts Using Copulas”, workshop held at SV University Thirupathi, India during 22-24 Nov’ 2010.

**JothiPrakash, V.**

Attended and presented papers in the following conferences: *Workshop on Integrated Water Resources Management (Crossing Boundaries)*, Anna University, 26<sup>th</sup> April 2010.

*International 7<sup>th</sup> Annual Meeting AOGS 2010*, Hyderabad, India, July 5-9, 2010, pp144.

*National Workshop on Geo-Statistics and Soft Computing Techniques for Spatial Data Management*, Sri Venkateswara University, Tirupati, 22-24 Nov. 2010.

*ASCE-EWRI 4<sup>th</sup> International Perspective on Water Resources the Environment IPWE- 2011*, National University of Singapore, Singapore, 4-6<sup>th</sup> Jan 2011.

**Tarun Kant**

Participated in *International Union of Theoretical Applied Mechanics (IUTAM) General Assembly* in Paris, France on 16-19 July 2010 as a Member, representing Indian National Science Academy (INSA).

**K.V. Krishna Rao**

Participated and presented two papers in the *12th World Conference on Transport Research* held during 11–15 July 2010 in Lisbon, Portugal.

**Rao E.P**

Participated by invitation in *Indo-US Bilateral Workshop 2010 on Sedimentation, Erosion, Flooding, and Ecological Health of Rivers (WSEHR-10)* at Indian Statistical Institute, Kolkata, during November 1 – 3, 2010.

**Rastogi A.K**

MRBC Dispersion Parameters Assessment by SA, GA and GNM Inverse Modeling - V P Huggi and Rastogi A K – Oral presentation in the *5<sup>th</sup> International Conference in Environmental Science and Technology (5<sup>th</sup> ICEST 2010)* Organised by American Academy of Sciences, held at Hilton Hotel, Houston, Texas, USA July 13 – 16, 2010.

**Vedagiri P**

Participated in the international seminar on *Introduction of Guidelines for Expressways*, Mumbai, 14 May 2010.

Participated and presented a paper in International Workshop on *Transportation Planning Methodologies and Implementation for Developing Countries (TPMDC-2010)* towards sustainability, IIT Bombay 15 - 17 December, 2010.

Participated in the international seminar on *Green Building And Sustainable Infrastructure*, Taj Mahal Palace, Mumbai, 13 April 2011.

**Viswanadham. B.V.S.**

Attended and participated in 7<sup>th</sup> International conference on *Physical modeling in Geotechnics (ICPMG)*, Zurich, Switzerland, June 28-July 1, 2010 presented three papers orally at the conference and presented a general report on 'Dams and Embankments' on June 29 2010 during the conference.

Attended and participated in 6<sup>th</sup> International congress on *Environmental Geotechnics* at New Delhi during November 8-12, 2010

Attended and participated in 1st US-India Workshop on *Global Geoenvironmental Engineering Challenges (GGEC)* held at New Delhi on November 7 2010.

**Invited Lectures**

**Banerjee Sauvik**

*Ultrasonic Guided Waves for Large Area NDI of Metallic and Composite Structures – Modelling, Simulation and Signal Processing*, Pre-Conference Tutorial on 'Signal Analysis, Simulation and Modeling', National NDE Seminar, NDE-2010, Kolkata, December 7, 2010.

*Finite Element Modeling of Wave Propagation and Vibration Problems With Applications to Structural Health Monitoring*, Veermata Jijabai Technological Institute, Matunga, Mumbai, January 21, 2011.

*Ultrasonic Guided Waves for Large Area NDI of Metallic and Composite Structures*, ISRO Satellite Centre, Bangalore, February 2, 2011.

*Impact of climate change on hydro-hazards: hydrological extremes and water related disasters- adaptation and mitigation measures*, UNESCO International Workshop on “Adaptation and Mitigation Options for Tackling the Impacts of Climate Change on Water Resources”, March 14-15, 2011, New Delhi

**Choudhury, D.**

Seismic Behaviour of Piles in Liquefied Soils for Infrastructural Applications, on 18th March, 2011, at Oklahoma Transportation Center (OkTC), Oklahoma 73110, USA.

Recent Advances in Seismic Slope Stability Analysis, on 12th February, 2011, at Central Building Research Institute (CBRI), Roorkee, India.

Applications of Geotechnical Earthquake Engineering Research for Disaster Mitigation and Management, on 23rd October, 2010, at Chongqing, China.

Recent Researches on Geotechnical Earthquake Engineering at IIT Bombay, on 26th July, 2010, at Department of Civil Engineering, Monash University, Melbourne, Victoria 3800, Australia.

Geotechnical Earthquake Engineering: Recent Researches at IIT Bombay, on 23rd July, 2010, at School of Civil Engineering, University of Wollongong, NSW 2522, Australia.

**Dasaka, S.Murty**

Delivered a lecture on *Reliability Based Design in Geotechnical Engineering*, as part of CEP-QIP short-term course on Advances in Geotechnical Engineering, at IIT Bombay, on April 18, 2010.

Delivered a lecture on *Shallow Foundations – Analysis and Design* as part of in-house Continuing Education Programme for M/s.FL Smidth Pvt. Ltd., Mumbai, at IIT Bombay, on July 10, 2010 .

Delivered the keynote address on *Effect of Loading Mechanism on Plate Load Test Results* at the state level seminar on Recent Trends In Civil Engineering, Department of Civil Engineering of Shahajirao Patil Vikas Pratishthan's S.B. Patil College of Engineering Indapur, Maharashtra, February 19, 2011.

**Deo, M.C.**

Key Note Speech in *Hydro-2010* conference held at Mullana, During Dec. 16-18, 2010

**Eldho, T.I.**

Invited Lecture, *Fluid Mechanics Studies and Applications*, Nirma University, Ahmedabad, 10<sup>th</sup> February 2011.

Invited Lecture, *Watershed Based Rainfall-Runoff Modeling/ Flood Simulation Using FEM, GIS and Remote Sensing*, Sardar Vallabhai National Institute of Technology, Surat, India, 28<sup>th</sup> August 2010.

Invited Lecture, *Integrated Watershed Modeling for Rainfall-runoff using FEM, GIS and Remote Sensing*, Center Water Resources Development and Management, Kozhikode, Kerala, 4<sup>th</sup> June 2010.

**Gopal R Patil**

Real-time traffic counting and monitoring system, *National workshop on Intelligent Transportation Systems*, Pune, June 2010)

Transportation Network Design Problem, *QIP short term course*, IIT Bombay, July 2010

Real-time Traffic Counting and Monitoring System, *QIP short term course*, IIT Bombay, July 2010

Emission based Traffic Assignment Models, *9th International Workshop on Transportation Planning and Implementation Methodologies in Developing Countries (TMPDC)*, Mumbai, India, December 15-17, 2010

**Gupta Kapil**

Impact of climate change on hydro-hazards: hydrological extremes and water related disasters- adaptation and mitigation measures, UNESCO International Workshop on “Adaptation and Mitigation Options for Tackling the Impacts of Climate Change on Water Resources”, March 14-15, 2011, New Delhi

**Ghosh. S**

Keynote lecture on *Steel plate shear wall* in the International Conference on the Innovative World of Structural Engineering, Aurangabad, India, 2010.

Keynote lecture on *Probabilistic characterization of primary stress index  $B_2$  in nuclear piping* in the 2<sup>nd</sup> AFRRE Meeting at IIT Kharagpur, India, 2011.

**Janga Reddy M.**

Delivered an invited lecture on “Impact Assessment of Climate Change on Regional Droughts in India” in a QIP/CEP course- Climate Change and Water Management, held at IIT Bombay, during February 28 – March 04, 2011.

**Jothiprakash, V.**

*Soft Computing Techniques in Water Resources Engineering*, National Conference on Civil Engineering for Infrastructural Developments (CID-2010), D.Y. Patil College of Engineering, Akurdi, Pune, 30 – 31 Aug 2010.

*Conceptual design of airport drainage network*, Short Term Course on Basics of Flood Modeling, NITTR, Chennai, on 3<sup>rd</sup> October 2010.

*Reservoir Inflow Prediction Using Time-Delay Recurrent Neural Network with Spatially Distributed Rainfall Data*, National Workshop on *Geo-Statistics and Soft Computing Techniques for Spatial Data Management*, Sri Venkateswara University, Tirupati, 23<sup>rd</sup> Nov. 2010.

“Design of storm water drainage network in low lying areas”, Short Term Course on “Urban Storm Drain Designing and Modeling”, SVNIT, Surat, on 10<sup>th</sup> Jan. 2011.

**Juneja A**

Delivered Invited Lecture on *Geotechnical centrifuge modelling* at the Department of Civil Engineering, National Kaohsiung University of Applied Sciences, Kaohsiung, Taiwan (May 2010)

**Pani B.S**

Invited lecture, *Effective Effluent Management for Environment Sustenance*, International Congress of Environmental Research, Sep 2010, Reduit (Mauritius).

**Rao E.P**

Delivered a lecture to the participants of QIP and CEP short term course on *Climate Change and Water Management*, Civil Engineering Department, IIT Bombay, Mumbai, 28 February – 4 March, 2011.

**Singh, D.N.**

Delivered a lectur on *Instrumentation for Various Geoenvironmental Engineering Issues*, CWPRS, Pune, December 2010.

**Viswanadham. B.V.S.**

A lecture entitled *Centrifuge model studies on landfill cap covers* was delivered at the LTHE, Department of Civil Engineering, University of Joseph Fourier 1, Grenoble, France on June 4 2010.

A lecture entitled *Studies on Waste Containment Systems and Relevance to India* was delivered at the workshop *Relevance of*

Scientific MSW landfilling to Indian Mega cities conducted at IIT Bombay on November 1 2010

An invited lecture entitled *Studies on landfill containment systems* was delivered at the Department of Civil Engineering, Goa University on November 3, 2010.

A keynote lecture entitled *Potential of Geosynthetics for Infrastructure Projects* was delivered on January 24, 2011 at 14<sup>th</sup> All India Builders Conference held in Chennai.

## **Honorary Work**

### **Bajoria k.M.**

Referee PhD Thesis (IIT Delhi)

### **Banerjee Sauvik.**

Reviewed papers for Journal of Structural Health Monitoring, Structural Control and Health Monitoring. Taught three lecture sessions of the Industry Technical Training for FLSmith Engineers, conducted by Civil Engineering Department from April 17-July 17, 2011.

### **Chandiramani, N. K.**

Reviewer for : AIAA Journal, Journal of Sound and Vibration, ASME Journal of Dynamic Systems, Measurement and Control, Mechanics of Advanced Materials and Structures, Applied Mathematical Modeling, Sadhana, Structural and Multidisciplinary Optimization, Composite Structures, ASCE Journal of Computing in Civil Engineering, Journal of Institution of Engineers (India)

### **Choudhury, D.**

Editorial Board Member of 'ISSMGE Bulletin' (Quarterly Newsletter), published by International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), London, U.K. Editorial Board Member of 'International Journal of Geotechnical Earthquake

Engineering (IJGEE)' (ISSN: 1947-8488), IGI publishing. Editorial Board Member of Journal 'Disaster Advances' (ISSN: 0974-262X), published from India. Managing Editor for December 2010 issue (Volume 4, Issue 4) of 'ISSMGE Bulletin', published by International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), London, U.K. Responsible Member to shortlist the ASCE Papers for nomination of Awards from UNSAT committee of Geo-Institute, American Society for Civil Engineers (GI-ASCE), USA. Reviewer of technical papers for several Journals like (i) Soil Dynamics and Earthquake Engineering, Elsevier (ii) Journal of Geotechnical and Geoenvironmental Engineering, ASCE, (iii) International Journal of Geomechanics, ASCE, (iv) Engineering Geology, Elsevier (v) Geotechnical Engineering, Proc. of Institute of Civil Engineers (ICE), (vi) Ground Improvement, ICE (vii) Geotechnical and Geological Engineering, Springer (viii) Landslides, Springer (ix) Bulletin of Earthquake Engineering, Springer (x) Scientia Iranica, Transaction A (xi) Waste Management, Elsevier, (xii) FUEL, Elsevier, (xiii) Acta Mechanica Solida Sinica, Elsevier, (xiv) Civil Engineering Journal of Institute of Engineers, IEI, India and (xv) Indian Geotechnical Journal, IGS, India. Reviewer for GeoFrontiers 2011: Annual Conference of Geo-Institute (GI), ASCE, USA. Reviewer for GeoRisk 2011: Conference of Geo-Institute (GI), ASCE, USA. Reviewer for 64th Canadian Geotechnical Conference and 14th ISSMGE Pan American Conference (2011 Pan-Am CGS Geotechnical Conference), October 2 - 6, 2011, Toronto, Ontario, Canada organized jointly by ISSMGE and Canadian Geotechnical Society, Canada. Reviewer for 13th International Conference of International Association for Computer Methods and Advances in Geomechanics (13IACMAG 2011), May 9-11, 2011, Melbourne, Australia organized by IACMAG, USA. Reviewer for Sponsored Research Project Proposal of 2010-2011 for SERC Division of Department of Science and Technology (DST), Govt. of India. Member of Technical Committee TC 203 on Geotechnical Earthquake Engineering of International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), London, U.K. Technical Advisory Committee (TAC) Member, 4th International Conference on Grouting and Deep Mixing (Grout2012) during

February 15 – 18, 2012, New Orleans, Louisiana, USA, jointly organized by Deep Foundations Institute (DFI) and International Conference Organization for Grouting (ICOG), USA. Serving as Nominated Expert Member of the Departmental Undergraduate Programme Committee (DUPC) of Department of Civil Engineering, College of Engineering, Pune (COEP), India, since January 2009.

**Dasaka, S.Murty**

Elected Member of Executive Committee, Indian Geotechnical Society, for the term 2011-12. Reviewer: (i) Journal of Geotechnical and Geoenvironmental Engineering, ASCE , (ii) International Journal of Geotechnical Earthquake Engineering (IJGEE), (iii) International Journal of Earth Sciences and Engineering, (iv) International Conference on Physical Modelling in Geotechnical Engineering (ICPMG2010), (v) International Conference on Advances in Geotechnical Engineering (GEOFRONTIERS-2011), (vi) Indian Geotechnical Conference (IGC-2010)

**Deo, M.C.**

Editor, International Journal of Ocean and Climate Systems, Multi-Science Publishing, U K. Associate Editor of ASCE Journal of Computing in Civil Engg. Chairman, Editorial board of ISH Journal of Hydraulic Engineering, Member, Editorial Board, International Journal of Ships & Offshore Structures, Taylor & Francis, Member, Editorial Board, Open Ocean Engineering Journal, Bentham Press, UK. Member, Editorial Board, Journal of Advances in Civil Engineering, Hindawi Pub.New York, Member, Editorial Board of past Civil-Comp conference-2010, Portugal, Editor: Special issues of the ISH Journal of Hydraulic Engineering -2010. Independent Director, Konkan Railways. Reviewed around 30 papers for international and national journals. Reviewed Ph D theses of IITM (2), IITR, NITTTR. Member, Scientific Advisory Committee, NIOT. Member, Project Management Board, NIOT, Member, faculty selection committee of IITKGP (2), Member, Scientist Selection Committee, CSIR.

**Eldho, T.I.**

Associate Editor of International Journal of Ecology and Development. Editor-in-Chief of the Journal “International Journal of Water Resources and Environmental Management” published by Research Science Press. Referee Ph.D. Thesis, IIT Roorkee; NIT Surathkal, IIT Madras, JNTU, Hyderabad, ISI Kolkotta, University of Malaya, Malaysia. Technical Review Committee Member of ICAR, Rubber Dam project implemented by Indian Rubber Manufacturing Research Association, Thane. Technical Committee Member of Ninth International Conference on Hydro-Science and Engineering, held at IIT Madras Reviewed Project proposal for DST, New Delhi, 2010. Member, UGAPEC, IIT Bombay. Youtube webcasted the Video Course on “Fluid Mechanics”, and rated as popular engineering course video. Reviewed research papers for the following Journals in 2009-2010. Journal of Water Management, Institution of Engineers, UK International Journal of Water and Environmental Management, Journal of Water Resources Management, International Journal of Ecology & Development, ASCE Journal of Irrigation and Drainage, Journal of Environmental Modeling & Software, ASCE Journal of Practice of Hazardous, Toxic, and Radioactive Waste Management, Int. J. Hydrological Processes, ISH Journal of Hydraulics Engineering, Journal of Institution of Engineers (India) – Civil Engineering Section, ASCE Journal of Hydrologic Engineering, International Journal of Earth Sciences and Engineering, Journal of Earth System Science, Journal of Geomatics, Sadhana - Academy Proceedings in Engineering Science, Journal: Frontiers of Environmental Science and Engineering in China, Journal of Agricultural Science and Technology, Journal of Contaminant Hydrology, Journal of Spatial Hydrology, Journal of Natural Hazards, Journal of Pedosphere, Journal of Water Resources Research

**Gopal R Patil**

Papers reviewed for : Journals: Network and Spatial Economics, Transportation Research Record, Transportmetrica, Journal of Advanced Transportation, Current Science. Conferences:

Transportation Research Board annual meeting, Washington DC;  
ICTPA 24th Annual Conference, Los Angeles

**Gupta Kapil**

Membership of working groups/expert committees as follows:  
Member -UNESCO Working Group: Sustainable Urban Water Strategies, VII IHP, 2008-2013. Member- Editorial Board: Urban Water Journal. Convener and Member, Expert committee for drafting the “Guidelines for urban flood disaster management” for National Disaster Management Authority, Government of India, New Delhi. Member, Expert committee on drafting the “Urban Drainage Manual”, CPHEEO, Ministry of Urban Development, Government of India, New Delhi.

**Ghosh S**

Reviewer: (i) ASCE Journal of Bridge Engineering, (ii) ASCE Journal of Structural Engineering (iii) Engineering Structures (iv) ISET Journal of Earthquake Technology (v) Sadhana. Examiner of Ph.D./Masters thesis from (i) IIT Roorkee and (ii) VJTI, Mumbai. Reviewer of course-materials developed under the National Mission on Education using Information and Communication Technology (NME-ICT). Expert member of Department Undergraduate Programme Committee (DUPC) and Department Postgraduate Programme Committee (DPPC-Structuar Engineering) of Dept of Civil Engineering, College of Engineering, Pune

**Janga Reddy, M.**

Reviewed project proposals to DST; Reviewed technical papers for Journals: Journal of Hydrologic Engineering (ASCE), ASCE Journal of Water Resources Planning and Management, Journal of Hydrology, Journal of Hydroinformatics, Water Resources Management, Irrigation & Drainage, Environment Modeling and Software, ISH Journal of Hydraulic Engineering, Journal of Earth System Science.

**Jangid, R.S.**

Reviewer for research papers of Advances in Structural Engineering, ASCE Journal of Structural Engineering, Bulletin of Earthquake Engineering, Earthquake and Structures, Engineering Structures, International Journal of Physical Sciences, International Journal of Structural Stability and Dynamics, Journal of Engineering for The Maritime Environment, Journal of Seismology and Earthquake Engineering, Journal of Sound and Vibration, Journal of Vibration and Control, Marine Structures, Mechanical Systems and Signal Processing, Structural Control and Health Monitoring, Soil Dynamics and Earthquake Engineering, Proceedings of The Institution of Mechanical Engineers, Part M, Structural Engineering & Mechanics, Sadhana- Academy Proceedings in Engineering Science, Scientific Research and Essays, and The Open Ocean Engineering Journal. Editorial Board Member, The Open Ocean Engineering Journal. Editorial Board Member, The Open Construction and Building Technology Journal. Editorial Board Member, Earthquakes and Structures Journal. Independent Director, ETC Network Limited.

**Jothiprakash, V.**

Co-opted member ISH , CWPRS, Pune, 2010-2012. Indian Examiner for Ph.D and M.S thesis of IIT Madras and Anna University. Reviewer : Hydrological Sciences Journal, Journal of Hydrology, Sadhana, ASCE Journal of Hydrologic Engineering, ASCE Journal of Hydraulic Engineering, Natural Hazards, Water Resources Research, Water Resources Management (Springer Publications), Journal of Institution of Engineers (India) Civil Engineering Division, Journal of Indian Society of Hydraulics. NSS coordinator IIT Bombay.

**Juneja A**

Reviewer of papers in Journals: (i) Geotechnical Testing Journal, ASTM, American Institute of Physics, NY; (ii) Journal of Materials in Civil Engineering, ASCE; (iii) Ground Improvement Journal; (iv) Geotechnical and Geological Engineering, Springer Science; (v) Geomechanics and Engineering, an International Journal; (vi) Canadian Geotechnical Journal; (vii) Journal of Civil Engineering,

Institution of Engineers (India). Reviewer of papers in Conferences: (i) International Conference on Physical Modelling in Geotechnics, Zurich (2010); (ii) Indian Geotechnical Conference, Mumbai (2010) Reviewed more than 40 papers for IGC 2010. Core Member ATC-18 on Deep excavations and Mega Foundations of ISSMGE. Member TC 305 on MegaCities of ISSMGE

**K.V.Krishna Rao**

Member of the Panel for Sustainability, CED 46:P19, Part 11 - Approach to Sustainability, National Building Code 2005, Bureau of Indian Standards. Member of the Standing Technical Advisory Committee on Road Works, Municipal Corporation of Greater Mumbai. Member of the IRC technical committee on *Transport Planning, Traffic Engineering & Road Safety* (H-1). Member of the IRC technical committee on *Urban Roads* (H-8)

**Pani B S**

Reviewer (i)Journal of Hydraulic Engineering, ASCE (ii)Journal of Hydro-environment Research, IAHR (iii)Advances in Water Resources (iv)Canadian Journal of Civil Engineers

**Rastogi. A. K.**

Invited to evaluate Ph.D. Thesis, Department of Civil Engineering, I I Sc Bangalore April, 2010. Invited to conduct Ph.D. viva, Department of Civil Engineering, IISc Bangalore Oct, 2010. Invited to evaluate Ph.D. Thesis, Department of Civil Engineering, IIT Roorkee, March 2011. Member Advisory Committee, Dept. of Civil and Environment Engineering, VJTI, Mumbai. Member Board of Studies of Dept. of Civil and Water Management Engineering, SGGS Institute of Engineering and Technology, Nanded. Invited as Expert on academic evaluation process Dept. of Civil and Water Management Engineering, SGGS Institute of Engineering and Technology. Member Expert Panel – *Indian National Committee on Groundwater*, Govt. of India. Member Expert Panel – *Indian National Committee on Hydraulics*, Govt. of India. Reviewer : (i) Jr. of Porous Media (ii) Asian Jr. of Water Environment and Pollution (iii) Canadian Geotech.

Jr. Hydrogeology Jr. (iv) International Journal of Water (v) Journal of Water Resource and Protection (vi) ISH-Jr. of Hydr. Engg. (vii) Journal of Hydrology. (viii) Jr. of Inst. of Engineers – Civil Engg. Divn (ix) KSCE Jr. of Civil Engineering. Selected to appear in Who's Who World Class Alliance – 2011 by Continental Broadcasting Network Inc US.

**Singh, D.N.**

**Editorial Board Member** (i) International Journal of Geomechanics, ASCE (ii) Geotechnical Testing Journal, ASTM International (iii) Geomechanics and Geoengineering (Taylor & Francis). (iv) Korean Society of Civil Engineering (KSCE) Journal of Civil Engineering (v) International Scholarly Research Network (ISRN) Civil Engineering. (v) International Journal of Geotechnical Engineering (vi) Geomechanics and Engineering (GAE), *An International Journal of Computational and theoretical Geomechnics, Foundation Engineering Engineering Applications, Site Characterization*. Guest Editor: Special Issue: *Contemporary Issues in Ground Improvement Techniques: Ground Improvement (Thomas Telford Ltd.)*, Volume 163, Issue GI4, November 2010. Special Issue: *Characterization of Unsaturated Soils: Geotechnical and Geological Engineering (SPRINGER)*, Guest Editors: D. N. Singh and Sai K. Vanapalli, Volume 29, Number 2, March 2011.

**Subimal Ghosh**

Reviewer of Water Resources Research, Journal of Geophysical Research, Journal of Hydrologic Engineering, Journal of Hydrology, Climatic Change etc.

**Tom V.M**

Member of the International Technical Committee(ITC), IEEE Intelligent Transportation Systems Conference, ITSC 2011, 2011, Washington DC, USA. Member, Technical Scrutiny Committee for the Development of Multi-level Car Parking in Greater Mumbai, Municipal Corporation Of Greater Mumbai, 2010. Member, Technical Scrutiny Committee for the Local Area Traffic

Improvement Project in Greater Mumbai, Municipal Corporation Of Greater Mumbai, 2010.

**Vedagiri. P**

Reviewer: Journal of Transport, Journal of Public Transport, ASCE Journal of Computing in Civil Engineering, Journal of Advanced Transportation.

**Publications**

**Books**

**Desai Y.M & T.I. Eldho**

Text Book: “Finite Element Method with Applications in Engineering” – Y.M. Desai, T.I. Eldho, A.H. Shah, Published by Pearson Education, New 978-81-317-2464-4, 470 Pages. Delhi, 2011, ISBN

**Edited Books/ Monograph:**

“Climate Change and Water Management” – Editors: Subimal Ghosh & T.I. Eldho, IIT Bombay.

**Rastogi. A. K.**

Rastogi A K, Aparna B, Sanjeeta K and Sunitha K - Modeling and Inverse Modeling in Groundwater Hydrology - DM Verlag, Saarbrücken, (W. Germany) 2010, pp 404. ISBN 978-3-639-22961-5

**Chapters in Books**

**Deepankar Choudhury**

Sanjay S. Nimbalkar and **Deepankar Choudhury** (2010); "Effect Of amplification on seismic stability of tailings dam", In GeoShanghai 2010: Soil Dynamics and Earthquake Engineering, Geotechnical Special Publication No. 201, ASCE, Edited by M. Huang, X. Yu and

Y. Huang (ISBN 978-0-7844-1102-5), Reston, VA, USA, pp. 340-346.

Deshmukh V. B., **D. M. Dewaikar** and **Deepankar Choudhury** (2010); "Uplift capacity of pile anchors in cohesionless soil", In GeoShanghai 2010: Deep Foundations and Geotechnical In Situ Testing, Geotechnical Special Publication No. 205, ASCE, Edited by R. Y. Liang, F. Zhang and K. Yang (ISBN 978-0-7844-1106-3), Reston, VA, USA, pp. 267-276.

Purnanand P. Savoikar and **Deepankar Choudhury** (2010); Equivalent linear seismic analyses of MSW landfills using FLAC3D, Proc. of the 6<sup>th</sup> International Congress on Environmental Geotechnics (6ICEG), November 8 –12, 2010, New Delhi, India, Environmental Geotechnics for Sustainable Development [ISBN (13): 978-0-07-0716-0, ISBN (10): 0-07-070716-2], Eds. M. Datta, R. K. Srivastava, G. V. Ramana and J. T. Shahu, Tata McGraw Hill, New Delhi, India, Vol. 2, pp. 1325-1330 and in CD Rom

**Kant. T**

Kant, T., Shiyekar, S.M. and Subbaiah, C.V. (2010), Higher order theories of functionally graded beams and plates, in IUTAM Symposium on Multi-Functional Material Structures and Systems (Proc. IUTAM Symposium on Multi-Functional Material Structures and Systems, Bangalore, 10-12 December 2008), Edited by B. Dattaguru, S. Gopalakrishnan and V.K. Aatre, Springer, Dordrecht, pp. 65-74.

**Singh, D.N.**

A chapter on "Earth Dams" by D. N. Singh, S. K. Shukla and D. N. Arnepalli, Geosynthetics and their Applications, Editor: Dr. S. K. Shukla, Publisher: *Thomas Telford Limited, London, U.K.* Publication Year : 2011

**Ghosh S**

Ghosh S, Kharmale SB (2010), Research on steel plate shear wall: past, present and future, Chapter 2 in "Structural Steel and Castings:

Shapes and Standards, Properties and Applications”, Nova Science Publishers, Hauppauge, NY, USA.

### **National Journal Papers**

Bera, S. and **Krishna Rao, K.V.** (2010) “Improvement of Convergence in Frank-Wolfe Algorithm for Large Size Real Networks” *Journal of the Institution of Engineers (India)*, Civil Engineering Division, India, Vol. 91, Issue No.2, pp. 3-8.

Bhuyan, P.K., and **Krishna Rao K.V.** (2010) “Level of Service Criteria of Urban Streets for Indian Cities”. *Highway Research Journal, IRC, Volume-3, Issue No.2, New Delhi*, pp. 39-50.

Das, B.B., **Singh, D. N.** and Pandey, S.P., (2010) “A comparative study by three ASTM specified techniques for the determination of pore volume of concrete”, *Indian Concrete Journal*, Vol. 84, December, (12). pp. 7-12.

**Deepankar Choudhury** and Sumedh Yamaji Mhaske (2010); “Geospatial technology for study of response system – phase of earthquake disaster management of Mumbai city”, *Disaster Advances*, (ISSN: 0974-262X, IF: 0.138/2009) India, Vol. 3, No. 4, pp. 23-29.

**Ghosh Subimal.** Raje D. and P. P. Mujumdar (2010), "Mahanadi Streamflow: Climate Change Impact Assessment and Adaptive Strategies", *Current Science*, 98(8), pp 1084-1091.

**Janga Reddy M,** and S. Adarsh. (2010). “Slope-Stability Modeling for Embankments using Particle Swarm Optimization”, *Indian Geotechnical Journal, IGS*, 40(4), pp. 247-254.

**Jothiprakash, V,** C. Natarajan and R Muralidharan (2010) “Pipe network analysis in an educational campus- a case study” *Journal of Indian Water Works Association*, Vol. XXXXII, No 2, pp (In press)

**Jothiprakash V** and A. Tamilmani (2010) “Planning and Designing of an Integrated Rainwater harvesting System for a Water Scarce College Campus”, *Journal of Institution of Engineers (India)*, 91, CV, May 18, pp. 10-16.

**Juneja, A.** & Dutta, S. (2010). “Modelling of ground deformation above circular unlined tunnels in sand using geo-centrifuge”, *Indian Geotechnical Journal*, 40(3), 167-173.

Kote A.S. and **V. Jothiprakash** (2010) “Intermittent Reservoir Inflow Prediction with Stochastic and Genetic Programming Models” *Journal of Indian Water Resources Society*, Vol. 30, No. 4, Oct., pp10-19.

Mir, M.S., **Krishna Rao, K.V.** and Hunt, J.D. (2010), “Data Solutions for Developing a Space Development Model of a Developing Metropolitan Region”, In: SRIRAMAN, S. (Ed.), *Transportation System Studies and Policy Analysis*, 1<sup>st</sup> Edition, Himalayan Publishing House, Mumbai, pp.51-66.

Roy Chowdhury A, **Ghosh S** (2010), “Inclusion of P- $\Delta$  effect in the estimation of hysteretic energy demand based on modal pushover analysis”, *ISET Journal of Earthquake Technology*, Vol. 47(2-4).

Sanghpriya S Kamble and **Tom V Mathew**, (2010) Real World Driving Cycle for 2-Wheelers and its Importance in Emission Estimation. *Indian Journal of Transport Management (IJTM)*. Vol.34, 239-247.

Shahapure, S.S., Kulkarni A.T., Bharat K.S.R., **Eldho T.I.**, **Rao E.P.**, (2010), “Coastal urban flood simulation using FEM-GIS Based Model”, *ISH Journal of Hydraulics Engineering*, Vol. 16, S.P.I, pp. 74-88.

**Tom V. Mathew** and K.V.R. Ravishankar, (2010) Review of Car-Following Models and Following Behaviour in Heterogeneous Traffic Conditions, *Highway Research Journal, IRC*, 3(2).

## International Journal Papers

Adarsh S and **M. Janga Reddy** (2010). Use of Particle Swarm Optimization for the Optimal Design of Composite Channels. *Journal of Intelligent Systems*, Freund & Pettman publications, 19 (3), 163-184.

Ajay Sharma and **R.S. Jangid**,( 2010) “Seismic response of base-isolated benchmark building with variable sliding isolators”, *Journal of Earthquake Engineering*, USA, Vol. 14, pp. 1063-1091.

Arnepalli, D. N., Rao, B. H., Shanthakumar, S. and **Singh, D.N.**, (2010) “Determination of distribution coefficient of geomaterials and immobilizing agents”, *Canadian Geotechnical Journal*, Vol. 47, pp.1139-1148.

Arpita Mondal, **Eldho T.I.**, and V.V.S. Gurunadha Rao, (2010), “Multiobjective Groundwater Remediation System Design Using Coupled Finite-Element Model and Nondominated Sorting Genetic Algorithm II”, *Journal of Hydrologic Engineering*, ASCE, 2010, Vol. 15, No.5, pp. 350-359.

**Bajoria K M** and Das S, (2010) "Finite Element Analysis of the Pseudo-elastic Behavior of Shape Memory Alloy Truss and Beam", *IJASE*, International Journal of Advanced Structural Engineering, Volume 2, Number 1, pp 11-26.

Bandivadekar T.P and R.S. Jangid, (2010) “Dual layer multiple tuned mass dampers for vibration control of structures”, *International Journal of Advanced Structural Engineering*, Vol. 2, pp. 91-113.

Bhatia V, **Ghosh S**, (2010) “Upgrading of non-ductile steel frames using steel plate shear walls”, *International Journal of Advanced Structural Engineering*, Vol. 2(2).

Bhuyan, P.K., and **Krishna Rao K.V.** (2010) "FCM Clustering Using GPS Data for Defining Level of Service Criteria of Urban Streets", *Transport Problems: an International Scientific Journal*, Poland. Volume-5, Issue No.4, 105-113.

Das, A., and **Viswanadham., B.V.S.**, (2010). "Experiments on the piping behavior of geofiber-reinforced soil", *Geosynthetics International*, Vol. 17, No. 4, pp. 171-182.

**Dasaka, S.M.** and Sivakumar Babu, G.L. (2010). "Effect of Spatial Correlation Structure and Transformation Model on the Design of Shallow Strip Footing", *Geomechanics and Geoengineering: An International Journal*, Vol.5, No.2, pp. 91-97.

Deepa D., and **Eldho T. I.**, (2010), "Discussion on the paper -Effect of Spacing of Two Off-set Jets on Scouring Phenomena", *Journal of Hydraulic Research, IAHR*, Vol. 48 (4), pp. 550-552.

**Deepankar Choudhury** and Purnanand Savoikar (2011) "Seismic yield accelerations of MSW landfills by pseudo-dynamic approach", *Natural Hazards*, (ISSN: 0921-030X, IF: 1.217/2009) *Springer*, Netherlands, Vol. 56, No. 1, pp. 275-297.

**Deepankar Choudhury** and Purnanand Savoikar (2011), "Seismic stability analysis of expanded MSW landfills using pseudo-static limit equilibrium method", *Waste Management & Research*, (ISSN: 0734-242X, IF: 1.308/2009) Sage Publications Ltd., London, U.K., Vol. 29, No. 2, pp. 135-145.

**Deepankar Choudhury** and Syed Mohd. Ahmad (2010) "Pseudo-static design factors for stability of waterfront retaining wall during earthquake", *Journal of Earthquake and Tsunami*, (ISSN: 1793-4311, IF: 0.457/2009) World Scientific Publishing Company, Singapore, Vol. 4, No. 4, pp. 387-400.

Deepthi R and **M C Deo**, (2010), “Effect of climate change on design wind at the Indian offshore locations”, *Ocean Engineering, Elsevier*, 37 (2010), pp.1061-1069.

Deshmukh V.B, **D. M. Dewaikar** and **Deepankar Choudhury** (2010), “Computations of uplift capacity of pile anchors in cohesionless soil”, *Acta Geotechnica*, (ISSN: 1861-1125) *Springer*, The Netherlands, Vol. 5, No. 2, pp. 87-94.

Divya, P.V., **Viswanadham, B.V.S.**, Gourc, J.P. (2011), “Influence of Geofibers on the Performance of Landfill Cap Covers: Centrifuge Study”, *Geo-Frontiers 2011*, *ASCE Special Publication No. 221*, pp. 1971-1979.

Garg V and **V. Jothiprakash**, (2010) “Modeling Time Variation of Reservoir Trap Efficiency” *Journal of Hydrologic Engineering*, *ASCE*. Vol.15, No.12, pp 1001-1015.

Garg V and **V. Jothiprakash**, (2010) “Reservoir Trap Efficiency Using Artificial Neural Networks” *International Journal of Ecology and Development*, Vol. 15, No. W10, pp 14-25.

Garudkar, A.S., Goranthiwar, S.D., **Rastogi, A.K.**, and **Eldho T.I.**, (2010) “Simulation Model for Evaluation of Irrigation Project”, *International Journal of Agricultural Engineering*, Vol. 3(1), pp. 179-183.

**Ghosh Subimal** (2010), “Modelling bivariate rainfall distribution and generating bivariate correlated rainfall data in neighbouring meteorological subdivisions using copula”, *Hydrological Processes*, Vol. 24, pp. 3558-3567.

**Ghosh Subimal** (2010), “SVM-PGSL coupled approach for statistical downscaling to predict rainfall from GCM output”, *Journal of Geophysical Research*, 115, D22102, doi: 10.1029/2009JD013548.

**Ghosh Subimal** and Misra C (2010), “Assessing Hydrological Impacts of Climate Change: Modeling Techniques and Challenges”, *Open Hydrology Journal*, Vol. 4, pp. 115-121

Gourc, J.P., Camp, S., **Viswanadham, B.V.S.**, and Rajesh, S.(2010) “Deformation behaviour of clay cap barriers of hazardous waste containment systems: full-scale and centrifuge tests”, *Geotextiles and Geomembranes Journal*, Vol. 28, issue 3, pp. 281-291.

Hanumantha Rao, B. and **Singh, D.N.**, (2010) “Application of Thermal Flux for Establishing Soil-Water Characteristic Curve of Kaolin”, *Geomechanics and Geoengineering: An International Journal*, Vol. 5(4), pp. 259–266.

Hanumantha Rao, B. and **Singh, D.N.**, (2010) “Establishing Soil-water Characteristic Curve of a Fine-grained Soil from Electrical Measurements”, *Journal of Geotechnical and Geoenvironmental Engineering, ASCE*, Vol. 136(5), pp. 751-754.

**Janga Reddy M**, and S. Adarsh (2010), “Chance Constrained Optimal Design of Composite Channels Using Meta-heuristic Techniques”, *Water Resources Management, Springer*, Vol.24, No.10, pp. 2221-2235.

**Janga Reddy M**, and S. Adarsh (2010), “Overtopping Probability Constrained Optimal Design of Composite Channels using Swarm Intelligence Technique”, *Journal of Irrigation and Drainage Engineering, ASCE*, Vol. 136, No. 8, pp. 532-542.

**Jangid, R.S.** (2010.) “Stochastic response of building frames isolated by lead-rubber bearings”, *Structural Control and Health Monitoring, USA*, Vol. 17, pp. 1-22.

Jeremy Blum, Anoop Sridhar, **Tom V Mathew**, (2010) Origin-Destination Matrix Generation from Boarding-Alighting and Household Survey Data for a Large Multi-modal Public Transit

System, Transportation Research Record: *Journal of the Transportation Research Board*, 2183, 1-8.

**Jothiprakash, V, R, Magar and Sunil K, (2010)** “Lumped and distributed data ANN models for an intermittent river” *Journal of Flood Engineering*, Vol. 1, No. 2, pp 159-173.

**Jothiprakash, V., and R. Mohandoss, (2010)** “Weekly operational planning model for a runoff river system” *Water Policy*, Vol. 12, No. 3, pp 318-335.

**Juneja, A. & Mir, B.A. (2010).** “Behaviour of clays containing seashell fragments under undrained triaxial loading”, *International Journal of Geotechnical Engineering*, Vol. 4(4), pp. 565-571.

**Juneja, A., Hegde, A., Yeo, C.H. & Lee, F.H. (2010).** “Centrifuge modelling of tunnel face reinforcement using forepoling”, *Tunnelling & Underground Space Technology*, Vol. 25(4), pp. 377-381.

**Juneja, A., Mir, B.A. & Parihar, A. (2011).** “Effects of sand compaction pile installation in model clay beds”, *International Journal of Geotechnical Engineering*, Vol. 5(2), pp. 199-209.

**Kambekar A R and M C Deo** "Wave simulation and forecasting using wind time history and data driven methods", *International Journal of ships and Offshore Structures*, Taylor and Francis, DOI: 10.1080/17445300903439223, 2010.

**Kambekar A.R. and M.C. Deo** “Wave prediction using genetic programming and model trees”, *International Journal of Coastal Research*, Coastal Research and Education Foundation, USA, DOI: 10.2112/JCOASTRES-D-1 -10-00052.1, 2010.

**Kame G.S, D. M. Dewaikar and Deepankar Choudhury (2010),** “Active thrust on a vertical retaining wall with cohesionless backfill”, *Electronic Journal of Geotechnical Engineering*, (ISSN: 1089-3032), USA, Vol. 15, Bundle Q, pp. 1848-1863.

Kannan, S. and **Ghosh, Subimal** (2011), “Prediction of daily rainfall state in a river basin using statistical downscaling from GCM output”, *Stochastic Environmental Research and Risk Assessment*, Springer. DOI 10.1007/s00477-010-0415-y

Kashid S, **Ghosh, Subimal** and Maity R. (2010), “Streamflow prediction using multi-site rainfall obtained from hydroclimatic teleconnection”, *Journal of Hydrology*, 395, pp. 23-38, doi:10.1016/j.jhydrol.2010.10.004

Khasnabis, S., **Dhingra, S.L.**, Mishra, S., Safi, C.(2010) Mechanisms for transportation infrastructure investment in developing countries, *Journal of Urban Planning and Development* 136 (1), art. no. 012001QUP, pp. 94-103.

Kulkarni A.T., Shahapure, S.S., **Eldho T.I., Rao E.P.**, B.K. Mohan (2010), “Flood simulation using finite element method and geographic information system for a coastal urban catchment: A case Study”, *International Journal of Water Resources & Environmental Management*, Vol. 1(2), pp. 215-225.

Kulkarni, M. P., Patel, A. and **Singh, D.N.**, “Application of Shear Wave Velocity for Characterizing Clays from Coastal Regions”, *KSCE Journal of Civil Engineering*, 2010, 14(3), 307-321. DOI 10.1007/s12205-010-0307-1.

Lila A and **Rastogi A K**, (2010), “Phreatic Aquifer System Parameter Assessment with Four Variants of GA”, *International Jr. of ESc. and Engg.*, Vol. 3, No.6, 784 – 792,.

Madhekar S.N. and **R.S. Jangid**, (2010), “Seismic performance of benchmark highway bridge with variable friction pendulum system”, *Advances in Structural Engineering*, USA, Vol. 13, pp. 561-589.

Madhekar S.N. and **R.S. Jangid**, (2010). “Seismic response control of benchmark highway bridge using variable dampers”, *Smart Structures and Systems*, USA/Korea, Vol. 6, pp. 953-974.

Marur, S.R. and **Kant, T.** (2011), “Transient dynamic analysis of higher order sandwich and composite arches”, *Composite Structures* Vol. 93(4), pp. 1201-1216.

Matsagar V.A. and **R.S. Jangid**, (2010), “Impact response of torsionally coupled base isolated structure”, *Journal of Vibration and Control*, USA, Vol. 16, pp. 1623-1649.

Mohrlok, U., Kirubaharan, S., **Eldho, T.I.** (2010), “Transport Characteristics in a 3D Groundwater Circulation Flow Field by Experimental and Numerical Investigation”, *Journal of Hazardous, Toxic & Radio Active Waste Management, ASCE*, 2010, Vol. 14, No.3, pp. 185-194.

Padmakumar Radhakrishnan and **Tom V Mathew**, (2011) Passenger car units and saturation flow models for non-lane-based heterogeneous traffic, *Transportmetrica*, 7(2), 141-162.

Panchal, V.R. **R.S. Jangid**, D.P. Soni and B.B. Mistry, (2010) “Response of the double variable frequency pendulum isolator under triaxial ground excitations”, *Journal of Earthquake Engineering*, USA, Vol. 14, pp. 527-558.

Patel C.C and **R.S. Jangid**, (2010). “Seismic response of adjacent structures connected with semi active variable friction dampers”, *International Journal of Acoustics and Vibration*, USA, Vol. 15, pp. 39-46.

Patel C.C. and **R.S. Jangid**, (2010) “Seismic response of dynamically similar adjacent structures connected with viscous dampers”, *the IES Journal Part A: Civil And Structural Engineering*, singapore/usa, vol. 3, pp. 1-13.

Patel C.C. and **R.S. Jangid**, (2010). “Seismic response of adjacent structures connected with maxwell dampers”, *Asian Journal of Civil Engineering (Building and Housing)*, USA/Iran, Vol. 11, pp. 585-603,

Patel, A. and **Singh, D.N.** and Singh, K.K., (2010) “Performance Analysis of Piezoceramic Elements in Soils”, *Geotechnical and Geological Engineering*, Vol. 28, pp. 681–694.

Patil S, Singh V P and **Rastogi A K**, (2010). “Linear Instability Theory for Frequency Assessment of Coherent Vortices in Submerged and Aside Rigid Canopies”, *ASCE, Journal of Hydrologic Engineering*, Vol.15, No.12, pp 1023-1029.

**Patil, G. R.**, Ukkusuri, S. (2011). “The sample average approximation technique for the flexible network design problem”, *Journal of Computing in Civil Engineering*, In Press.

Pendhari, S.S., **Kant, T., Desai, Y.M.** and Subbaiah, C.V. (2010). “On deformation of functionally graded narrow beams under transverse loads”, *International Journal of Mechanics and Materials in Design*, Vol. 6(3), pp. 269-282.

Phanikanth V. S., **Deepankar Choudhury** and G. Rami Reddy (2010) “Behavior of fixed head single pile in cohesionless soil under lateral loads”, *Electronic Journal of Geotechnical Engineering*, (ISSN: 1089-3032), USA, Vol. 15, Bundle M, pp. 1243-1262.

Phanikanth V. S., **Deepankar Choudhury** and G. Rami Reddy (2010), “Response of single pile under lateral loads in cohesionless soil”, *Electronic Journal of Geotechnical Engineering*, (ISSN: 1089-3032), USA, Vol. 15, Bundle H, pp. 813-830.

Pooja Jain, **M C Deo**, G Lath and V Rajendran, (2011) “Real time wave forecasting using wind time history and numerical model”, *Ocean Modelling*, Elsevier, Vol. 36, pp. 26–39.

Purnanand Savoikar and **Deepankar Choudhury** (2010) “Computation of pseudo-static yield accelerations of landfills”, *International Journal of Geotechnical Engineering*, (ISSN: 1938-6362) J. Ross Publishing Co., USA, Vol. 4, No. 3, pp. 305-317.

Purnanand Savoikar and **Deepankar Choudhury** (2010) “Effect of cohesion and fill amplification on seismic stability of MSW landfills using limit equilibrium method”, *Waste Management & Research*, (ISSN: 0734-242X, IF:1.308/2009) Sage Publications Ltd., London, U.K., Vol. 28, No. 12, pp. 1096-1113.

Purohit S.P, and **N. K. Chandiramani**, (2010). “Optimal static output feedback control of a building using a MR damper”, *Structural Control and Health Monitoring* (published online, (DOI: 10.1002/stc.406).

Raghunandan, M.E. & **Juneja, A.** (2011), “A study on the liquefaction resistance and dynamic properties of de-saturated sand”, *Electronic Journal of Geotechnical Engineering*, Vol. 16(A), pp. 109-123.

Raisinghani, D.V. and **Viswanadham, B.V.S.** (2010). “Evaluation of permeability characteristics of a geosynthetic reinforced soil through laboratory tests”, *Geotextiles and Geomembranes Journal*, Vol. 28, No. 6, pp. 579-588.

Rajesh, S. and **Viswanadham, B.V.S.** (2010). “Development of a Motor-Based Differential Settlement Simulator Setup for a Geotechnical Centrifuge”, *Geotechnical Testing Journal, ASTM*, Vol. 33, No. 6, pp. 501-507.

Rajesh, S. and **Viswanadham, B.V.S.** (2011). “Hydro-mechanical behavior of geogrid reinforced soil barriers of landfill cover systems”, *Geotextiles and Geomembranes Journal*, Vol. 29, No. 1, pp. 51-64.

Rao, B.H., Venkataramana, K. and **Singh, D.N.**, (2011). “Studies on determination of swelling properties of soils from suction measurements”, *Canadian Geotechnical Journal*, Vol. 48(3), pp. 375-387.

Rathore M, Roy Chowdhury A, **Ghosh S**, (2011), “Approximate methods for estimating hysteretic energy demand on plan-asymmetric

buildings”, *Journal of Earthquake Engineering*, Vol. 15(1), pp. 99-123.

Ravikumar P and **Tom V Mathew**, (2011) Vehicle Actuated Signal Controller For Heterogeneous Traffic Having Limited Lane Discipline, *ITE Journal*, 81(5), 44-53.

Reshmidevi, T.V., **Eldho T.I.**, Jana, R., (2010 “Knowledge-Based Model for Supplementary Irrigation Assessment in Agricultural Watersheds” *Journal of Irrigation and Drainage*, ASCE, Vol. 136, No.6, pp. 376-382.

Sabyasachee Mishra, **Tom. V. Mathew**, and Snehamay Khasnabis, A (2011) Single-Stage Integer Programming Model For Long Term Transit Fleet Resource Allocation, *Journal of Transportation Engineering ASCE*, 136 (4), 281-381.

Sahu, R.K., Mishra, S.K., and **Eldho, T.I.**, (2010), “An Improved AMC-coupled Runoff Curve Number Model”, *Journal of Hydrological Processes*, Vol. 24(20), pp. 2834-2839.

Shahapure, S.S., **Eldho T.I., Rao E.P.**, (2010), “Coastal Urban Flood Simulation Using FEM, GIS and Remote Sensing”, *Water Resources Management*, Vol. 24, pp. 3615-3640.

Shanthakumar, S., **Singh, D.N.** and Phadke, R.C., (2010) “Methodology for Determining Particle-Size Distribution Characteristics of Fly Ashes”, *Journal of Materials in Civil Engineering*, ASCE, Vol. 22(5), pp. 435-442.

Shanthakumar, S., **Singh, D.N.** and Phadke, R.C., (2011) “Determining Residual Ammonia in Flue Gas Conditioned Fly Ashes and its Influence on the Pozzolanic Activity”, *Journal of Testing and Evaluation*, ASTM, Vol. 39(1), pp. 69-76.

Shiyekar, S.M. and **Kant, T.** (2010), “An electromechanical higher order model for piezoelectric functionally graded plates”,

*International Journal of Mechanics and Materials in Design*, Vol. 6(2), pp. 163-174.

Soneji B.B. and **R.S. Jangid**, (2010). “Response of isolated cable-stayed bridge under bi-directional seismic actions”, *Structure and Infrastructure Engineering*, USA, Vol. 6, pp. 347-363.

Sreedeeep, S. and **Singh, D.N.**, (2011) “A Critical Review of the Methodologies Employed for Soil Suction Measurement”, *International Journal of Geomechanics, ASCE*, Vol. 11(2), pp. 99-104.

Sushant Sharma and **Tom V. Mathew**,(2011) Multi-objective network design for emission and travel-time trade-off for a sustainable large urban transportation network, *Environment and Planning B: Planning and Design*, volume 38, pages 520-538.

Thamizh Arasan V and **P.Vedagiri**, (2011) “Modelling Modal Shift from Personal Vehicles to Bus on Introduction of Bus Priority Measure”. *Journal of Asian Transportation Studies*, Vol. (1), Issue 3, pp. 288-302.

**Tom V Mathew** and K Ravishankar,(2011) Car-following behavior in traffic having mixed vehicle-types *Transportation Letters - International Journal of Transportation Research*, 3 (2), 109-123.

**Tom V Mathew** and Padmakumar Radhakrishnan,(2010) Calibration of Microsimulation Models for Non-lane-Based Heterogeneous Traffic at Signalized Intersections, *Journal of Urban Planning and Development, ASCE*, 136, 59.

**Tom V Mathew**, Snehamay Khasnabis, and Sabyasachee Mishra, (2010) Optimal resource allocation among transit agencies for fleet management, *Transportation Research Part A: Policy and Practice*, 44, 418-432.

Varma MN, **Jangid RS**, **Ghosh S**, (2010). “Thrust line using linear elastic finite element analysis in masonry structures”, *Advanced Materials Research*, pp. 133-134:503-508.

Venkata Reddy, K., **Eldho, T.I.**, **Rao, E.P.**, Kulkarni A.T. (2011), “FEM–GIS based channel network model for runoff simulation in agricultural watersheds using remotely sensed data”, *Intl. J. River Basin Management*, Vol. 9, No. 1, pp. 17–30.

**Viswanadham, B.V.S.**, Jha, B.K., and Pawar, S. (2010) “Influence of geofibers on the flexural behavior of compacted soil beams”, *Geosynthetics International*, Vol. 17, No. 2, pp. 86-98.

**Viswanadham, B.V.S.**, Jha, B.K., Pawar, S.N. (2010). “Experimental study on flexural testing of compacted soil beams”, *Journal of Materials in Civil Engineering, ASCE*, Vol. 22, No. 5, pp. 460-468.

Zhang, L.M. and **Dasaka, S.M.** (2010). "Uncertainties in Geologic Profiles versus Variability in Pile Founding Depth", *Geotechnical and Geoenvironmental Engineering, ASCE*, Vol.136, No.11, pp. 1475-1488.

#### **National Conference Papers**

Abhay P. Shelke and **Dasaka, S.M.** (2010). “Reduction of Swelling Pressure of Expansive Soils on Foundations”, In Proceedings of the Indian Geotechnical Conference (IGC-2010), 16-18 December, 2010, IIT Bombay, Mumbai.

Adarsh S., and **M. Janga Reddy** (2010), Optimal Design of Composite Channels Considering Slope Stability Criterion, GEOTrendz, IGC-2010, IIT Bombay, Mumbai, India, pp: 945-948.

Adhana, S., Mandal, T., **Mandal, J.N.** (2010). “Three Dimensional Circular Geocell Reinforced Fly Ash Slopes”. All India Seminar on Geosynthetics – Innovative and Environmentally Sustainable Solution for Civil Engineering Projects.

Alka Y. Pisal and **R.S. Jangid**, (2010). “Dynamic characteristics of structures with tuned mass friction dampers”, *14<sup>th</sup> Symposium on Earthquake Engineering*, Roorkee, pp. 949-959, December 17-19.

Amey D. Katdare and **D. Choudhury** (2010); A critical study on seismic design of retaining structures, Proceedings of Indian Geotechnical Conference, IGC-2010 (GEOtrendz), (ISBN 023 0332072), December 16 – 18, 2010, IIT Bombay, Mumbai, India, Vol. 1, pp. 203-206 and in CD.

Arunkumar R and **V. Jothiprakash**, (2010). “A Review on Reservoir Optimization Models Using Genetic Algorithm Technique” *National Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering, HYDRO 2010*, M.M. University, Mullana (Ambala), pp. 719-725.

Bhamre S, Kharmale SB, **Ghosh S** (2010), “Seismic lateral force distribution for performance-based plastic design”, *14<sup>th</sup> Symposium on Earthquake Engineering*, Roorkee, India, December 17-19.

Das, N.K., **Mandal, J.N.** and Mandal, T (2010), “Experimental and FEM Analysis of the Geotextile Geotube”, Indian Geotechnical Conference – 2010, GEOtrendz, December 16–18, pp. 339-342.

Debarghya Chakraborty and **Deepankar Choudhury** (2010); Seismic slope stability analysis of tailings earthen dam using TALREN4, Proceedings of Indian Geotechnical Conference, IGC-2010 (GEOtrendz), (ISBN 023 0332072), December 16 – 18, 2010, IIT Bombay, Mumbai, India, Vol. 1, pp. 187-190 and in CD.

**Eldho T.I.** (2010). “Integrated Watershed Modeling for Rainfall-Runoff Simulation Using FEM, GIS and Remote Sensing Techniques”, *Proc. National Workshop on Hydroinformatics*, February 2010, M.S. University Baroda, pp. 45-60.

**Eldho T.I., B.V.S. Viswanadham,** Vijayasree B.A. (2010), “Physical Model Study of Scouring Effects on Pier Foundations of Bridges”, *Proc. Indian Geotechnical Conference -2010, Geotrendz, IIT Bombay*, December 16-18, 2010, pp. 973-976.

Fathima T A and **V. Jothiprakash,** (2010). “Study on Chaotic Behaviour of Reservoir Inflow” *14<sup>th</sup> National Symposium on Hydrology with Focal Theme on Management of Water Resources Under Drought Situation*, Dec 21-22, MNIT Jaipur, pp 94.

Ganguli P. and **M. Janga Reddy** (2010). “Hydro-Climatic Variability Study of Manjara Basin Aquifer using Bivariate Archimedean Copula”, *Proc. of International Conf. on Sustainable Water Resources Management and Climate Change Adaptation*, Levent Books, ISBN: 978-93-80663-13-5, NIT Durgapur (India), 17-19 Feb, pp. 240-249.

Ganguli P. and **M. Janga Reddy** (2010). “Probabilistic Characterization of Hydrologic Extremes using Bivariate Copulas, Proc. of 9th International Conference on Hydro-science and Engineering (ICHE-2010), IIT Madras, India, August 2-5, pp.746-756.

Garudkar, A.S., **Rastogi, A.K.,** and **Eldho T.I.,** Goranthiwar, S.D., (2010) “Water Release Policy Evaluation of Palkhed Project in Maharashtra”, *Proc. of 23<sup>rd</sup> National Convention of Agricultural Engineers & National Seminar*, Rahuri, Ahmednagar,.

Ghimire B.N.S. and **M. Janga Reddy** (2010), “Optimal Operation Of Multi-Purpose Reservoir Using Dynamic Programming”, *National Conference on Hydraulics, Water Resources & Coastal and Environmental Engineering (HYDRO-2010)*, MMU, Mullana, India, December 16-18, pp.705-712.

Harpreet K and **V. Jothiprakash,** (2010). “Short Term Rainfall Prediction Using MLR and ANN Models” *National Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering, HYDRO 2010*, M.M. University, Mullana (Ambala), Dec 16-18, pp. 734-739.

Hebsur, A., Muniappan, N., **Rao, E.P., Venkatachalam, G.**, (2010). "A Methodology for Detecting Buried Solids in Second-use Sites using GPR", *Proc. of Indian Geotechnical Conference (IGC-2010) GEOTrendz*, IIT Bombay, Mumbai, Dec. 16-18.

**Jothiprakash V** and Magar, (2010) "Reservoir Inflow Prediction Using Time-Delay Recurrent Neural Network with Spatially Distributed Rainfall Data" *National Workshop on Geo-Statistics and Soft Computing Techniques for Spatial Data Management*, Sri Venkateswara University, Tirupati, Nov 22-25.

**Jothiprakash, V**, Arunkumar R and J. Nirmala, (2010). "Evaluation of Vaigai Operating Rules Using a Simulation Model", *14<sup>th</sup> National Symposium on Hydrology with Focal Theme on Management of Water Resources Under Drought Situation*, Dec 21-22, MNIT Jaipur, pp 58.

**Juneja, A.** & Raghunandan, M.E. (2010). "Effect of sample preparation on strength of sands", *Indian Geotechnical Conference*, 16-18 December, Mumbai.

Mane, A. and **Viswanadham, B.V.S.** (2010). "Centrifuge modeling of wrap-around geogrid reinforced soil walls", *Proceedings of Indian Geotechnical Conference*, Geotrenz, December 16-18, IIT Bombay, India, Vol. 1, pp. 235-238.

Mir, B.A. & **Juneja, A.** (2010). "Strength behaviour of composite ground reinforced with sand columns", *Indian Geotechnical Conference*, 16-18 December, Mumbai.

Mondal A, **Ghosh S** (2010), "Response reduction factor of a RC framed structure based on local damage", *14<sup>th</sup> Symposium on Earthquake Engineering*, Roorkee, India, December 17-19.

**Patil, G. R.**, Patare, P., and Sangole, J., (2010) "Modeling Gap acceptance behavior of two-wheelers at limited priority uncontrolled intersections", *In proceedings of Conference on infrastructure, sustainable transportation and urban planning*, IISc Bangalore, India.

Praveen Kumar, **R.S. Jangid** and G.R. Reddy, (2010). “Seismic response control of piping system with X-plate damper and visco-elastic damper”, *14<sup>th</sup> Symposium on Earthquake Engineering*, Roorkee, pp. 936-948, Decmeber 17-19.

Raghunandan, M.E. & **Juneja, A.** (2010). "Site Specific Ground Response Analysis: An Example of Test Area in Mumbai", *6<sup>th</sup> International Congress on Environmental Geotechnics*, New Delhi.

Rajasekhar P., **B.V.S. Viswanadham, Eldho T.I.**, (2010), “Modeling of Pollutant Movement Through Saturated Porous Media: Centrifuge Study”, *Proc. Indian Geotechnical Conference -2010, Geotrendz*, IIT Bombay, December 16-18, pp. 969-972.

Ram Rathan Lal B., Das N.K., Sumit A., **Mandal J.N.** (2010), “Recent Development and Applications of Geocell Reinforced Fly ash Retaining walls, Slopes and Geotube”, Proceedings of the National seminar on Non Conventional Applications of Textiles”, December 11, 2010, Organized Indian Fiber Society(IFS) and Central Institute for Research on Cotton Technology(CIRCOT),Mumbai,106-110.

Rao C.J., **V. Jothiprakash, Eldho T.I.**, (2010), “Conversion of Intermittent Water Supply into Continuous (24x7) Water Supply System – A Case Study”, *Proc. National Conf., HYDRO2010*, Ambala, December 16-18, 2010, pp. 750-756.

Sangeetha, K Ritika and **D. Choudhury** (2011); Static and seismic slope stability analyses using FLAC2D, Abstract Volume of National Conference on 'Landslide Hazard – Consequences and Challenges', Eds. A. Ghosh, S. Sarkar and D. P. Kanungo, February 10-12, 2011, CSIR-CBRI, Roorkee, India, pp. 65-66 (abstract published).

Sangole, J., **Patil, G. R.**, and Patare, P., (2010) “Modeling gap acceptance behavior of two-wheelers at uncontrolled intersections using Neuro-Fuzzy”, *In proceedings of Conference on infrastructure, sustainable transportation and urban planning*, IISc Bangalore, India, October 2010.

Shanthakumar, S., **Singh, D.N.** and R. C. Phadke, (2010). “A Scanning Electron Microscopy Study on Flue Gas Conditioned Fly Ashes Collected from Thermal Power Stations”, *Indian Geotechnical Conference*, Mumbai, pp. 453-456.

Shibu A. and **M. Janga Reddy** (2010), “Fuzzy Uncertainty Analysis of Water Distribution Systems”, 1st International conference on Technological Trends (ICCT-2010), CET Trivandrum (India), November 25-27, 2010, Vol. 2, pp.230-238

Shibu A. and **M. Janga Reddy** (2010), “Uncertainty Analysis of Water Distribution System using Fuzzy Approach, National Conference on Hydraulics”, *Water Resources & Coastal and Environmental Engineering (HYDRO-2010)*, MMU, Mullana, India, December 16-18, 2010, pp.794-800.

Snehal V. Mevada and **R.S. Jangid**, (2010). “Seismic response of torsionally coupled system with semi-active dampers”, *14<sup>th</sup> Symposium on Earthquake Engineering*, Roorkee, pp. 828-838, Decmeber 17-19, 2010.

Thanu E Mathew and **M C Deo**, (2010). “Machine learning methods to retrieve wind data in HF radar measurements, Proceedings, *Hydro-2010*, Mulana, Dec. 14-16, 2010.

Thinakaran, E and **Jothiprakash, V**,( 2010). “Numerical Modelling Techniques of Lake Hydrodynamics”, *Proceedings of National Conference on Civil Engineering for Infrastructural Developments (CID-2010)*, D.Y. Patil College of Engineering, Akurdi, Pune, 30 – 31 Aug 2010, pp. 317 – 324.

Vaibhav Garg, and **Jothiprakash V**, (2010) “Reservoir Sedimentation Studies to Re-estimate Useful Life of a Reservoir”, *Proceedings of National Conference on Sustainable Water Resources Management and Impact of Climate Change*, BITS-Pilani Hyderabad Campus, March 5-6, 2010, pp 233-245.

Vinay KP, Kharmale SB, **Ghosh S** (2010), Expanded mesh shear wall: a new system for low seismic applications, *14<sup>th</sup> Symposium on Earthquake Engineering*, Roorkee, India, December 17-19, 2010.

**Viswanadham, B.V.S.**, and Rajesh. S. (2010). “Methodology for evaluation of hydro-mechanical behaviour of clay-based landfill covers in a geo-centrifuge”. *Proceedings of Indian Geotechnical Conference 2010, Geotrenz*, December 16-18, 2010, IIT Bombay, India, Vol. 1, pp. 289-292.

Vivekanandan N. and **M. Janga Reddy** (2010), Optimal Irrigation Planning Using Linear and Goal Programming Approaches, National Conference on Hydraulics, Water Resources & Coastal and Environmental Engineering (HYDRO-2010), MMU, Mullana, India, December 16-18, 2010, pp.881-888.

Zope, P.E., **T.I. Eldho** and **V. Jothiprakash**, (2010)“Effect of Urbanization on Flooding and Storm Water Drainage System: Case study of Mumbai, India”, *National Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering, HYDRO 2010*, M.M. University, Mullana (Ambala), 16-18, Dec 2010, pp. 281-288.

#### **International Conference Papers**

Aniruddh Jain, **Dasaka, S.M.** And Y.A. Kolekar. (2010). “Lessons Learned From Failure of a Field Plate Load Test”, In Proceedings of the International Symposium on Forensic Geotechnical Engineering, 14-15 December, 2010, IIT Bombay, Mumbai.

**Bajoria K M**, Jain P, Lahoti A and Prajapati D, (2010)“Tension Test on Whole Round Bamboo”, Oral Paper presented at Sixth International Engineering and Construction Conference, Paper No. VII-C4, American Society of Civil Engineers, Egypt, 28-30 June 2010.

**Bajoria K M**, Lahoti A, and Jain P, (2010) “Modern In-fill Jointing techniques in Bamboo Constructions”, Oral Paper presented at Sixth

International Engineering and Construction Conference, Paper No. VII-B4, American Society of Civil Engineers, Egypt, 28-30 June 2010.

**Banerjee, S.** and Morabada, U., (2010) “Damage Detection in Composite Structural Components Using Frequency Response Function Curvature Method”, International Conference on Theoretical, Applied, Computational and Experimental Mechanics, December 27-29, IIT Kharagpur, India, 2010.

**Banerjee, S.,** Garg, S., Vashishtha, S. and Pol, B. C. (2010) “Theoretical Modeling of Guided Wave Propagation in Honeycomb Composite Sandwich Structures”, *International Conference on Theoretical, Applied, Computational and Experimental Mechanics*, December 27-29, IIT Kharagpur, India, 2010.

**Choudhary P** and **Rastogi A K**, (2010). “FEM Simulation of RC Well in an Unconfined Aquifer”, *Proc. 4<sup>th</sup> World Aqua Congress*, 301- 308, Aqua Foundation, World Habitat Centre, New Delhi, Dec. 8-10, 2010.

Das, A., and **Viswanadham, B.V.S.** (2010). “Geofiber reinforced slopes subjected to seepage: Centrifuge study”, Proceedings of 9th International Conference on Geosynthetics *Geosynthetics: Advanced Solutions for a Challenging World* Guaruj, Brazil, E.M. Palmeira, Vidal D.M., A.S.J.F. Sayo & M. Ehrlich (Eds.), The Brazilian Chapter of the International Geosynthetics Society (IGSBrazil), Rua Ribeiro Claro, Vol. 4, pp. 1723-1726.

Debarghya Chakraborty and **Deepankar Choudhury** (2011), “Seismic behaviour of tailings dam using FLAC3D”, In Geo-Frontiers 2011, Dallas, TX, USA, March 13 to 16, 2011: *Advances in Geotechnical Engineering*, Geotechnical Special Publication No. 211, ASCE, Edited by J. Han and D. E. Alzamora, Reston, VA, USA, pp. 3138-3147.

Deepthi R and **M C Deo**, (2010) “Derivation of design wind and wave parameters considering climate change”, *Ninth International Conference on Hydro-Science and Engineering, ICHE 2010*, Aug 2-5, 2010.

**Eldho T.I.**, Nunna D.V.S., (2010), “Flood Simulation in Coastal Urban Areas with Tidal Effects”, *Proc. Second International Conference on Coastal Zone Engineering and Management (Arabian Coast 2010)*, Sultan Quabooz University, Muscat, Oman, November 1-3, 2010, pp. 69-77.

Felice, C. W., **Singh, D. N.** and Brennimen, H., (2010), “Geology and Geotechnical Conditions Encountered During the Bandra-Worli Sea Link Project”, *ISRM International Symposium 2010 and 6<sup>th</sup> Asian Rock Mechanics Symposium*, 23-27 October, 2010, New Delhi. India.

Garikapati, V., and **Krishna Rao, K. V.** (2010). “Modelling Choice of Airport and Access Mode,” *Proceedings CD of the 12th World Conference on Transport Research* held during 11 – 15 July 2010, Lisbon, Portugal.

**Ghosh S**, Kharmale SB (2010), “Steel plate shear wall”, *International Conference on the Innovative World of Structural Engineering*, Aurangabad, India, September 17-19, 2010.

**Gupta K**, (2010). “15-min ahead extreme rainfall forecast using support vector machine for urban flood disaster management in Mumbai” (with Vinay Nikam), *INEMREC-2011*, 24-25 February, 2011, Chennai, pp. 202-203 *International Conference Geosynthetics-Geosynthetics: Advanced Solutions for a Challenging World*, May 23-27, 2010, Guarujá, Brazil, 1039-1044, 2010.

Jain, S., Paliwal, V. and **Ghosh, Subimal** (2010), “Selection of Spatial Extent of Predictor Variables in Statistical Downscaling”, *The Ninth International Conference on Hydro-Science and Engineering (ICHE 2010)*, Indian Institute of Technology Madras, Chennai, India. 2-5 August 2010

Jaiswal, D. and **Patil, G. R.**, (2010). "Private Participation in Financing National Highways in India", *In proceedings of International Conference: Developments in Road Transportation (DRT - 2010)*, October 2010, Macmillan Publishers India Ltd., pp. 263- 270.

**Jothiprakash, V** and A. Kote "Equation-Based and Program-Based Genetic Programming Model for an Intermittent Reservoir Inflow Prediction" *ASCE-EWRI International Perspective on Environmental and Water Resources, IPWE 2011*, NUS, Singapore, Jan. 4-6, 2011.

**Jothiprakash, V**, and B. (2010) "Sivakumar "Nonlinear dynamic analysis of rainfall time series", *7<sup>th</sup> Annual Meeting AOGS 2010*, Hyderabad, India, July 5-9, 2010, pp143.

**Juneja, A.** & Raghunandan, M.E. (2011). "Effect on cyclic response and liquefaction resistance due to de-saturation of sand", *Proceedings of the Geo-Frontiers Conference, Dallas, Geotechnical Testing and Site Characterization ASCE GSP*, pp. 2594-2604.

**Juneja, A.** & Roshan, N.S. (2010). "Study on tunnelling induced ground deformation in reinforced soils", *International Conference on Physical Modelling in Geotechnics 2010*, Zurich, Springman et al. (eds.), Taylor & Francis Group, 555-560

Kambekar A. R and **M C Deo** "Real time prediction of ocean waves using wind time series", *Proceedings, Water-2010*, Quebec, Canada, July, 5-7, 2010.

Kannan, S. and **Ghosh, Subimal** (2010), Multi-site daily rainfall prediction for climate change scenarios using the non-parametric k-nearest neighbours, *The Ninth International Conference on Hydro-Science and Engineering (ICHE 2010)*, Indian Institute of Technology Madras, Chennai, India. 2-5 August 2010

Kharmale S.B, **Ghosh S** (2010), Displacement-based seismic design of steel plate shear wall systems with rigid-connected beams, *9<sup>th</sup> US*

*National and 10<sup>th</sup> Canadian Conference on Earthquake Engineering*, Toronto, Canada, July 25-29, 2010.

Khedkar M.S. and **Mandal J.N.**, “ Behavior of Cellular reinforced soil wall under uniformly distributed load”,9th International Conference Geosynthetics- Geosynthetics: Advanced Solutions for a Challenging World, May 23-27, 2010, Guaruja, Brazil, 1693-1698, 2010.

Meenal M., and **Eldho T.I.**, Gurunadha Rao V.V.S. (2011), “Simulation of Groundwater Flow and Contaminant Transport in Unconfined Aquifer Using Meshfree Point Collocation Method” *Proc. Int. Conf. “An International Perspective on Water Resources & the Environment*, National University of Singapore, January, 4-6, 2011, pp. 11-20.

Mhaske S. Y. and **D. Choudhury** (2010); Use of GIS-GPS for disaster management of liquefied zones during earthquake, Proc. of Bangladesh Geotechnical Conference 2010 (BGC-2010): Natural Hazards and Countermeasures in Geotechnical Engineering, November 4 – 5, 2010, Dhaka, Bangladesh, (ISBN 978-984-33-2180-0), pp. 340-345.

Motra G. B., and **N. K. Chandiramani**, (2010). “Semi-active Vibration Control of Connected Buildings using Magnetorheological Dampers”, *Proceedings of 17th International Congress on Sound and Vibration*, paper 441, July 18-22, 2010, Cairo.

Muniappan, N., Hebsur, A., Diyva Priya B., **Rao, E.P., Venkatachalam, G.**, (2011).“Subsurface Object Detection and Classification using Ground Penetrating Radar and Support Vector Machines”, *Proc. of Int. Seminar on Recent Advances in Geosciences*, Indian School of Mines, Dhanbad, 11-13 January, 2011.

**N.K. Chandiramani** and S.P. Purohit, (2010).“Instantaneous Optimal State Feedback Control of Seismic Response Using MR Dampers”, *Proceedings of 6<sup>th</sup> International Conference on Vibration Engineering*

*and Technology of Machinery (VETOMAC-VI)*, pp. 747-756, IIT Delhi, December 13-15, 2010, New Delhi.

Nadimpalli, S., and **Krishna Rao, K.V.** (2010). "Evaluation of Development Scenarios towards Sustainable Urban Transportation: A case Study of Pune," *Proceedings CD of the 12th World Conference on Transport Research* held during 11 – 15 July 2010, Lisbon, Portugal.

**Pani B.S.**, Lai, A.C.H. and Wong, C.K.C., (2010) "Turbulent Jets: Point-source and CFD Simulation Results", *International Congress of Environmental Research*, Sept. 2010, Reduit (Mauritius).

Patel, H.M, **Eldho T.I.**, and **A.K. Rastogi**, (2010) "Analytic Element Method and Genetic Algorithm Based Models for Estimating Stream Bed Resistance", *Proc., Ninth International Conference on Hydro-Science and Engineering*, held at IIT Madras, Chennai, India on August 2-5, 2010; Vol. I, pp. 503-510.

Patil V.B. and **R.S. Jangid**, (2010). "Optimum tuned mass damers for the wind excited Benchmark building", *International Conference on Innovative World of Structural Engineering (ICEWSE-2010)*, Aurangabad, pp. 828-838, Decmeber 25-27, 2010.

**Patil, G. R.**, Patare, P., and Sangole, J., (2011). "Gap acceptance behavior of two-wheelers at limited priority uncontrolled intersections", *In proceedings (CD-ROM) of 90th Transportation Research Board Annual Meeting*, Washington D. C. January 2011.

Purohit S. P., and **N. K. Chandiramani**, (2010). "Seismic Response Control of a Building using MR Damper with Optimal Static Output Feedback", *Proceedings of 17th International Congress on Sound and Vibration*, paper 433, July 18-22, 2010, Cairo.

Raisinghani, D.V., Khan, S., and **Viswanadham, B.V.S.** (2010). Evaluation of transmissivity characteristics of some geosynthetics under normal stress .*Proceedings of 9th International Conference on*

Geosynthetics *Geosynthetics: Advanced Solutions for a Challenging World* Guaruj, Brazil, E.M. Palmeira, D.M. Vidal, A.S.J.F. Sayo & M. Ehrlich (Eds.), The Brazilian Chapter of the International Geosynthetics Society (IGSBrazil), Rua Ribeiro Claro, Vol. 3, pp. 1159-1162.

Rajesh, S. and **Viswanadham, B.V.S.** (2010). “Performance evaluation of various clay-based landfill covers subjected to differential settlements: Centrifuge study”, *Proceedings of 6<sup>th</sup> International Congress on Environmental Geotechnics*, 8-12 November 2010, New Delhi, India, M. Datta, R.K. Srivastava, G.V. Ramana, and J.T. Sahu (Eds.), Tata McGraw Hill Education Private Limited, New Delhi (Pubs.), Vol. 1, 414-419.

Rajesh, S. and **Viswanadham, B.V.S.** (2010). “Use of geogrid as a resistive layer for landfill cover: centrifuge study”, *Proceedings of 9<sup>th</sup> International Conference on Geosynthetics Geosynthetics: Advanced Solutions for a Challenging World* Guaruj, Brazil, E.M. Palmeira, D.M. Vidal, A.S.J.F. Sayo & M. Ehrlich (Eds.), The Brazilian Chapter of the International Geosynthetics Society (IGSBrazil), Rua Ribeiro Claro, Vol. 2, pp. 999-1002.

Ram Rathan Lal B., Deshmukh V.B., **Mandal J.N.**, Mandal T., Tank J.J., Bhagat B., Jadhav R.(2011), “ Experimental and Finite Element analysis of Geocell reinforced fly ash retaining wall”, *The 26<sup>th</sup> International conference on Solid Waste Technology and Management*, March 27-30, 2011, Philadelphia,USA, 403-413.

**Rao E. P.**, Gopal Naik M., and **Eldho T. I.**, (2010), “Numerical Modeling of Watershed for Soil Erosion and Sediment Yield”, *Proc. Indo-US Bilateral Workshop on Sedimentation, Erosion, Flooding and Ecological Health of Rivers*, ISI, Kolkotta, November 1-3, 2010, pp.201-204.

Rathore M, Roy Chowdhury A, **Ghosh S** (2010), “Approximate methods for estimating hysteretic energy demand on uniaxial plan-asymmetric buildings”, *9<sup>th</sup> US National and 10<sup>th</sup> Canadian*

*Conference on Earthquake Engineering*, Toronto, Canada, July 25-29, 2010.

Ravikumar P and **Tom V. Mathew**, (2010) Adaptive Traffic Control System for Developing Countries, 17th ITS World Congress, Busan, 2010.

Ravishankar K V R and **Tom V. Mathew**, (2010) Simulation of Mixed Traffic Using Embedded Neural Network Based Vehicle Following Models 17th ITS World Congress, Busan, 2010.

Rawat A., Rakesh R.R. and **Mandal J.N.**, (2010) “ Effect of Glass grid geocell inclusion on Flexural behavior of cover soil for low level Radioactive waste disposal facilities”, *6th International congress on Environmental Geotechnics - Environmental Geotechnics for sustainable development*, 8-12,Nov 2010,New Delhi, India, (1) 402-407, 2010.

Rawat A., Rakesh R.R. and **Mandal J.N.**, (2010). “Application of Geosynthetics in low level radioactive waste disposal facilities” , 9th

Ricci, F., Monaco, E., Tancredi, S., Lecce, L, **Banerjee, S.**, and Mal, A. K., “Vibration and Ultrasonic Based Methodologies for Damage Detection”, *Fifth European Workshop on Structural Health Monitoring*, Sorrento, June 29-July 2, Sorrento, Naples, Italy, 2010.

Roshan, N.S. & **Juneja, A.** (2010). "Experimental study on tunnelling induced ground deformation in reinforced soil", *17th South East Asian Geotechnical Conference*, May 2010 (paper ID 4P-234)

Roy .P, **Ghosh S** (2010), Probabilistic characterization of primary stress index  $B_2$  for nuclear pipe bends, *International Conference on the Innovative World of Structural Engineering*, Aurangabad, India, September 17-19, 2010.

Roy P, **Ghosh S** (2010), Probabilistic characterization of primary stress index  $B_2$  for nuclear pipe bends subjected to in-plane opening

moment, 2<sup>nd</sup> *International Conference on Reliability Engineering, Safety and Hazard*, Mumbai, India, December 14-16, 2010.

Sanghpriya H.K and **Tom V. Mathew**, (2010) Real world driving cycle for 2-wheelers and its importance in developing emission factors, 3rd International Congress of Environmental Research (ICER-10), 16-18 September 2010, Mauritius.

Shahapure, S.S., A.T. Kulkarni, **Eldho T.I., Rao E.P.**, (2011), “Flood simulation in coastal urban watershed with Detention Pond Using FEM and Geo-spatial Techniques”, *Proc. Int. Conf. “An International Perspective on Water Resources & the Environment*, National University of Singapore, January, 4-6, 2011, pp. 1-10.

Sivakumar B, **V. Jothiprakash**, and V. Rajendran, (2011) “Transboundary Water Development and Management Science, Politics, and Society” *ASCE-EWRI International Perspective on Environmental and Water Resources, IPWE 2011*, NUS, Singapore, Jan. 4-6, 2011.

Sivakumar B., Ji Chen, and **V. Jothiprakash**, (2010). “Transboundary Water Management: Science and Politics” *7<sup>th</sup> Annual Meeting AOGS 2010*, Hyderabad, India, July 5-9, 2010, pp144.

Sivakumar, B, V. Rajendran, **V. Jothiprakash**, and A. Sharma,( 2011) “Challenges in Studying the Impacts of Global Climate Change on Water Resources” *ASCE-EWRI International Perspective on Environmental and Water Resources, IPWE 2011*, NUS, Singapore, Jan. 4-6, 2011.

Snehal V. Mevada and **R.S. Jangid**, (2010).“Seismic response of of asymmetric building with semi-active damper”, 14th European Conference on Earthquake Engineering (14ECEE), Ohrid, Paper No. 1259, August 30 to September 03, 2010.

Subbarao, S., and **Krishna Rao, K. V.** (2010). “Analysis of Activity-travel behaviour in the context of developing countries,” *Proceedings*

CD of the 12th World Conference on Transport Research held during 11 – 15 July 2010, Lisbon, Portugal.

Sumedh Yamaji Mhaske and **Deepankar Choudhury** (2011). “GIS-GPS based map of soil index properties for Mumbai”, In *Geo-Frontiers 2011*, Dallas, TX, USA, March 13 to 16, 2011: Advances in Geotechnical Engineering, Geotechnical Special Publication No. 211, ASCE, Edited by J. Han and D. E. Alzamora, Reston, VA, USA, pp. 2366-2375.

Sunil Rangari, **Deepankar Choudhury** and **D. M. Dewaikar** (2010) “Estimation of seismic vertical uplift capacity for horizontal plate anchors using Kotter’s equation”, *International Conference of Disaster Prevention Technology and Management (DPTM-2010)*, October 23 – 25, 2010, Chongqing, P. R. China (abstract published in special issue of Journal 'Disaster Advances' (ISSN: 0974-262X), Vol. 3, No. 3, pp. 610).

Sunil Rangari, **Deepankar Choudhury** and **D. M. Dewaikar** (2011); Pseudo-static uplift capacity of horizontal strip anchors, In *Geo-Frontiers 2011*, Dallas, TX, USA, March 13 to 16, 2011: Advances in Geotechnical Engineering, Geotechnical Special Publication No. 211, ASCE, Edited by J. Han and D. E. Alzamora, Reston, VA, USA, pp. 1821-1831.

Tancredi, S., Ricci, F., Monaco, E., Lecce, L, **Banerjee**, S., and Mal, A. K. (2010) “Lamb Waves Propagation for Low Velocity Impact Damages Analysis in Carbon Fibers Reinforced Plates: Experimental and Numerical Experiences”, Fifth European Workshop on Structural Health Monitoring, Sorrento, June 29-July 2, Sorrento, Naples, Italy, 2010.

Thinakaran. E, and **V. Jothiprakash**, (2011). “Diffusion analysis of suspended solids from a point source in a river”, *International Conference on Sustainable Water Resources Management and Climatic Change Adaptation*, NIT Durgapur, Feb. 17-19, 2011.

Trudeep N. Dave and **Dasaka, S.M.** (2011) "Universal Calibration Device for Pressure Transducer Calibration", *In Proceedings of the International Conference on Advances in Geotechnical Engineering (GEOFRONTIERS-2011)*, 13-16 March 2011, Texas, USA.

Trudeep N. Dave and **Dasaka, S.M.** (2010)."Critical Studies on Sand Bed Preparation using Rainfall Technique", *In Proceedings of the 6<sup>th</sup> International Congress on Environmental Geotechnics*, New Delhi, 8-12 November, 2010.

Varma M.N, **Jangid RS, Ghosh S** (2010), "Thrust line using linear elastic finite element analysis in masonry structures", *7<sup>th</sup> International Conference on Structural Analysis of Historical Constructions*, Shanghai, China, October 06-08, 2010.

**Viswanadham, B.V.S.** (2010). "Prediction of Failure of Geotechnical Structures using Centrifuge based Physical Modeling Technique", *Proceedings of International Symposium on forensic approach to analysis of Geohazard problems*, December 14-15, IIT Bombay, India, Sivakumar Babu, G.L. (Eds)., 203-216.

**Viswanadham, B.V.S.** (2010). "Relevance of centrifuge modeling technique for studying performance of waste containment systems.", *Proceedings of the 1st US-India Workshop on Global Geoenvironmental Engineering Challenges (GGEC)*, November 7, 2010, New Delhi, India, 183-191.

**Viswanadham, B.V.S.** and Deepa, V. (2010). "Evaluation of performance of soil-nailed slopes subjected to seepage in a Centrifuge". *Proceedings of 7<sup>th</sup> International Conference on Physical Modelling in Geotechnics 2010 (ICPMG2010)*, S. Springman, J. Laue and L. Seward (Eds.), Taylor and Francis group (Pubs.), Vol. 2, pp. 1151-1156.

**Viswanadham, B.V.S.** and Raisinghani, D.V. (2010). "Centrifuge model studies on the behavior of geocomposite reinforced soil slopes". *Proceedings of 7<sup>th</sup> International Conference on Physical*

*Modelling in Geotechnics 2010 (ICPMG2010)*, S. Springman, J. Laue and L. Seward (Eds.), Taylor and Francis group (Pubs.), Vol. 2, pp. 1157-1162.

**Viswanadham, B.V.S.** and Rajesh, S. (2010). “Effect of geogrid reinforcement on the deformation behavior of soil barrier for landfill covers”, *Proceedings of 7<sup>th</sup> International Conference on Physical Modelling in Geotechnics 2010 (ICPMG2010)*, S. Springman, J. Laue and L. Seward (Eds.), Taylor and Francis group (Pubs.), Vol. 2, pp. 1489-1495.

**Viswanadham, B.V.S.,** Basavraj, A., Vasaikar, G. (2010). “Evaluation of coal ash as a potential barrier for waste containment systems”, *Proceedings of 6<sup>th</sup> International Congress on Environmental Geotechnics, 8-12 November 2010*, New Delhi, India, M. Datta, R.K. Srivastava, G.V. Ramana, and J.T. Sahu (Eds.), Tata McGraw Hill Education Private Limited, New Delhi (Pubs.), Vol. 2, 1085-1088.

**Viswanadham, B.V.S.,** Sengupta, S.S., and Jha, B.K. (2010). “Effect of fiber reinforcement on the integrity of clay-based waste containment systems”, *Proceedings of 6<sup>th</sup> International Congress on Environmental Geotechnics, 8-12 November 2010*, New Delhi, India, M. Datta, R.K. Srivastava, G.V. Ramana, and J.T. Sahu (Eds.), Tata McGraw Hill Education Private Limited, New Delhi (Pubs.), Vol. 2, 1002-1005.

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Structural reliability, Optimization, Quality systems

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Structural engineering: Computer aided design, Non-linear analysis, Smart structures, Green Structures, Structural Rehabilitation, Cold-formed steel structures.

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Structural engineering: Earthquake analysis, Risk assessment, Artificial neural networks, Nuclear structures.

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Active vibration control, Nonlinear dynamics, Stability; Computational mechanics; Solid mechanics.

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Geotechnical engineering: Geotechnical Earthquake Engineering, Earth retaining structures, Slope Stability, Anchor, Pile, Bearing capacity problems, Earth Dams, Seismic effects on Reinforced Soil-Wall, Dynamic Soil-Structure interaction problems, Tsunami resistant design of waterfront structures, Seismic behavior of Landfills, Seismic

Ground Characterization, Behavior of Subgrade Soil under Cyclic railway and airways loads, Soil Dynamics, Machine Foundations, GIS-GPS based Hazard analysis, Soil Liquefaction, Centrifuge Modeling, Numerical and Analytical modeling of geotechnical problems.

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Geotechnical engineering: Site investigation, Stability of shallow and deep foundations, Reliability based design, Ground improvement, Landfill engineering and modeling of soil and rock.

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Ocean engineering: Random data analysis using artificial intelligence techniques, Neural networks, Genetic programming, Model trees, Locally weighted learning, Support vector machines, Soft computing, Data mining, Statistical and stochastic analysis, Hydrology (Random data analysis using soft computing tools)

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Structural engineering: Wind induced vibrations, Computational mechanics, Nonlinear analysis, Finite elements, Parallel computing, Fiber reinforced polymer composites, Composites in construction.

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Geotechnical engineering: Offshore foundations, Ground improvement, Seepage.

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Water resources engineering: Groundwater flow, pollutant transport, remediation – numerical & experimental investigations Computational fluid dynamics – Incompressible viscous flows, shallow water flow, estuary dynamics, pollutant transport Watershed management – applications of numerical models, Geographical Information Systems, Remote sensing.

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Structural engineering: Performance-based seismic design, Reliability-based seismic design, Plastic design of steel structures, Analysis and design of special plate shear walls.

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Remote sensing: Digital image processing (DIP) of multispectral, thermal and microwave data, Digital elevation modelling (DEM), Geographic information systems (GIS), Artificial neural networks (ANN), Applications of RS, GIS, DEM and ANN in hydrology.

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Structural engineering: Base isolation systems and energy absorbing devices, Earthquake analysis and design, Liquid storage tanks, Bridges, Vibration control of structures, Service life assessment of buildings.

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Water resources engineering: Urban water supply systems, Urban drainage, Urban water infrastructure management, Flood Protection structures, Computational fluid dynamics, Optimization,

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Structural engineering: Solid mechanics, Cellular adhesion and motility, Mechanics of soft materials, Dissipation in structural and mechanical systems.

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Water resources engineering: Water resource systems, Evolutionary computation for single and multi-objective optimization, Stochastic hydrology, Soft computing applications in hydrology, Climate change impacts on watersheds, water resources and agriculture, Design and performance evaluation of drip and sprinkler irrigation systems, Application of remote sensing and GIS tools in watershed development and management, Precision agriculture and developing decision support systems for water resources management.

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Geotechnical engineering: In-situ and laboratory engineering properties of soil, Numerical and physical modeling in geotechniques, Earthwork, Ground improvement.

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Structural engineering: Solid mechanics, Plates, Shells, Fiber reinforced polymer composite laminates, Higher order theories, Thermal stresses, Transient dynamic techniques, Finite elements, Numerical techniques, Polymer composites in construction, Composite mechanics, Computational mechanics.

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Transportation systems engineering: Travel demand modeling, Evolutionary algorithms, Neural networks and GIS in transport planning, Traffic design and analysis.

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Numerical/Experimental studies on geosynthetics, Centrifuge modeling of geosynthetics reinforced soil wall and slopes, Geosynthetics in Landfill-Municipal/Hazardous (Industrial)/Low level radio activewaste, Tsunami reconstruction with geosynthetics containment systems, Ground improvement techniques using PVD,encased stone column, smart-geosynthetics and Electrokinetics technique, Nano technology and geosynthetics, Geosynthetics in coastal/marine/hydraulics and waterway erosion control, Environmental remediation and waste containment, Geosynthetics in dewatering, Highway/Railways/Air ways/Pavements Embankments and reflection cracking/pothole/asphalt overlay, Geosynthetics in mining, Bio and agriculture engineering.

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Water resources engineering: Diffusion of jets and plumes, Multiple diffusers, Offshore pipelines, Scour problems, Cooling water structures.

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Remote sensing: Remote sensing applications to water resources, Runoff modeling, Water distribution systems optimization.

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Aquifer Remediation Strategies, Inverse Modeling of the Aquifers and Auto Calibration of Field Models, Solute Transport Modeling involving Hydrodynamic Dispersion in Aquifers, Ground Water Flow Modeling of Unconfined and Confined Aquifers, Well Hydraulics Modeling, Groundwater Systems Planning and Management and Coastal Aquifer Hydrodynamics Modeling

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Transportation systems planning, Network optimization, Freight transportation modeling, Traffic operations, Demand modeling, Traffic emissions

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Structural engineering: Earthquake engineering, Vibration control and isolation, Structure rehabilitation and condition monitoring, Disaster management.

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Geotechnical engineering: Centrifuge modeling, Soil reinforcement, Ground improvement, Environmental geotechnics-waste materials' behaviour, waste containment systems.