

Department of Civil Engineering

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 BTech degree programme. A dual degree BTech-MTech programme is also run in structural engineering. Postgraduate MTech (admissions through GATE/sponsorships) and PhD (through selections/ sponsorships) programmes are offered in the following five specializations:

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

This year, 43 MTech and 15 PhD students were admitted in the above specializations. In the first year, 49 students were on rolls in the BTech, 22 in the dual degree BTech/MTech programmes. During the year, 41 BTech, 40 MTech, 20 DD and 20 PhD students graduated from the Department.

AWARDS AND DISTINCTIONS

Prof. **D. Choudhury** received NASI Young Scientist Platinum Jubilee Award-2007, given by The National Academy of Sciences, India.

Prof. **D. Choudhury** elected as Fellow of International Congress of Disaster Management (FICDM).

Prof. **D. Choudhury** selected as Editorial Board Member (EBM) of Journal "Disaster Advances" published from Indore, India.

Prof. **D. Choudhury** selected as Member, Technical Committee of "Unsaturated Soil" of Geo-Institute (GI), American Society of Civil Engineers (ASCE), USA.

Prof. **D. Choudhury** selected as Member, Geo-Engineering Earthquake Reconnaissance (MGEER), Berkeley, CA, USA.

Prof. **T. I. Eldho** received DAAD Research Fellowship by Government of Germany under the special research grants for developing for one month during June/July 2007.

Prof. **T. I. Eldho** received Stockholm International Water Institute, SIWI, Sweden Fellowship to attend World Water Week in Stockholm, Sweden.

Prof. **T.I. Eldho** received special merit award by Institution of Engineers (India) for his paper published in Journal of Institution of Engineers (Civil).

Prof. **Eldho T.I.** selected as Member, Technical Review Committee on the research project on “Development of Rubber Dam for Watershed Development”, by ICAR (Indian Council of Agricultural Research), New Delhi and IRMRA (Indian Rubber Manufacturing Research Association) Mumbai.

Prof. **V. Jothiprakash** received The Union Ministry of Water Resources: Department of Irrigation Prize by Institution of Engineers (India) for best paper in the field of Water Resources, during the 22nd Indian Engineering Congress, Udaipur, December 14, 2007.

Prof. **Rajib Maity** received Grant from “International Visits and Exchanges Programme” of “International Liaison Programme” offered by the “International Centre of Excellence in Water Resources Management (ICE WaRM)”, Australia, 2008.

Prof. **Rajib Maity** received Fast Track Project Grant for Young Scientists from Science and Engineering Research Council (SERC), Department of Science and Technology (DST), Govt. of India, 2007.

Prof. **D. N. Singh** received Best Paper Award in Civil Engineering (for 2006-2007) by Hari Ohm Ashram Prerit Shri Bhaikaka Inter-University Smarak Trust, Sardar Patel University, Vallabh VidyaNagar, for the paper “Generalized Archie’s Law for Estimation of Soil Electrical Conductivity”.

Extension Activities

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

CEP Five-days short-term course during 25-29 February, 2008 at L. D. College of Engineering, Ahmedabad, Gujarat under Directorate of Technical Education Gujarat, on topic “Geotechnical Earthquake Engineering” for Civil Engineering Academicians and Practitioners as CEP course from IIT Bombay from C-DEEP of IIT Bombay as an activity for the Golden Jubilee Extension Centre of IIT Bombay at Gandhinagar, Gujarat, India.

CEP Course on Application of Centrifuge Modelling to Geotechnical Engineering Practice, IIT Bombay, November 13-15, 2007.

Special session on Application of Geotechnical Physical Modelling to Infrastructure Development, 13th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering, Kolkata, December 10, 2008.

CEP course on Good Construction Aspects of Building Foundations for M/s Nagarjuna Construction Corporation Limited, IIT Bombay, August 19-21, 2007.

CEP course on Finite Element Methods for engineer of DRDO laboratory, Research and Development Establishment (Engineers), Dighi, Pune, January 17-20, 2008.

Half-day workshop on IGS (Mumbai) and IIT Bombay lectures on Plaxis FE programming, IIT Bombay, April 2008.

QIP/CEP course on Soft Computing Techniques in Water Resources Management, Civil Engineering Department, IIT Bombay, November 19-23, 2007.

Short course on Urban Drainage Management-State-of-the-Art 2007, IIT Bombay, June 11-13, 2007.

Short course on Urban Drainage Management-State-of-the-Art 2008, IIT Bombay Golden Jubilee Extension Centre, Gandhinagar, Gujarat, March 11-13, 2008.

Sponsored Research

During the financial year 9 projects were completed and 12 new sponsored research projects worth about 67.18 lakhs were initiated during the year. A few of the ongoing and new projects are listed below:

Estimation of design values of seismic bearing capacity of foundations by pseudo-dynamic method (INAE).

Evaluation of Coal ash as a landfill liner material for waste containment systems (DST).

Inelastic displacement-based design of steel plate shear wall (SPSW) structures (DST-SERC).

Integrated watershed modelling using IRS data and geographical information systems (ISRO-IITB).

Assessment of hydroclimatic teleconnection for basin-scale, real-time streamflow and its use in real-time streamflow forecasting (DST).

Hydroclimatological characteristics of spatio-temporal rainfall distribution over India (IIT Bombay).

Seismic analysis of piping systems with supplemental devices (BRNS).

Centrifuge model studies on strong ground motion in the near field (BARC).

Consultancy Work

199 consultancy projects worth about Rs. 5.18 crores were undertaken during the year by the Civil Engineering Department. 21 faculty members were involved in the above consultancy work.

Books/Chapters in Books

Prof. **D. Choudhury** has been Invited for chapter entitled “Computations of Seismic Earth Pressures for Design of Earth Retaining Structures” in book entitled “Design of Foundations in Seismic Areas: Principles and Applications” edited by Subhamoy Bhattacharya, NICEE Publications, (ISBN 81-904190-1-3), Kanpur, India, March 2007, Chapter 5, pp 209-225.

Prof. **T. I. Eldho** and **Prof. V. Jothiprakash** edited Monograph for CEP/ QIP Short-term course on “Soft Computing Techniques in Water Resources Management”, Civil Engineering, IIT Bombay, November 19-23, 2007.

Prof. **Siddhartha Ghosh** is ongoing author of the Section (6.139.6) on “Structural Reliability” for the Encyclopedia of Life Supporting System (UNESCO-EOLSS).

Prof **A. K. Rastogi** has become author of text book entitled “Numerical Groundwater Hydrology (p980)”, Penram International Publication, ISBN 818797227-0.

National Journal Papers

Bhosekar V. V. and **Jothiprakash V.**

Aerators on high head spillways ISH-NEWS, *The Indian Society for Hydraulics*, Volume 6, No 1, pp 1-3, 2007.

Choudhury D.

Response of soil slopes under earthquake conditions using 2-DOF dynamic model, *Journal of The Institute of Engineers (India)*, Volume 88, pp 41-47, 2008.

Choudhury D.

Editorial on need for researches on disasters – Advances and mitigations, *Journal ‘Disaster Advances’*, Volume 1, No 1, pp 3, 2008.

Jothiprakash V., Devamane M. G. and Sasireka K.

Inter-comparison of temperature-based reference crop evapotranspiration methods, *Journal of Institution of Engineers (India)*, Volume 88, pp 19-26, 2007.

Jothiprakash. V., Magar R. and Sunil K.

Rainfall runoff models using linear regression – A case study of an intermittent river, *Journal of Indian Association for Environmental Management*, Volume 34, No 3, pp 125-131, 2007.

International Journal Papers

Arnepalli D. N., Shanthakumar S., Rao H. B. and **Singh D. N.**

Comparison of methods for determining specific surface area of fine-grained soils, *Geotechnical and Geological Engineering*, Volume 26, No 2, pp 121-137, 2008.

Bakre S. V., **Jangid R. S.** and Reddy G. R.

Response of piping system on friction support to bi-directional excitation, *Nuclear Engineering and Design*, Volume 237, pp 124-136, 2007.

- Bakre S. V. and **Jangid R. S.**
Optimum parameters of tuned mass damper for damped main system, *Structural Control and Health Monitoring*, Volume 14, pp 448-470, 2007.
- Bambole A. N. and **Desai Y. M.**
Hybrid-interface finite element for thick laminated composite plates, *Computers Structures*, Volume 85, 1484-1499, 2007.
- Bambole A. N. and **Desai Y. M.**
Hybrid-interface finite element for laminated composite and sandwich beams, *Finite Element Method in Analysis and Design*, Volume 43, No 13, pp 1023-1036, 2007.
- Bartake P. P. and **Singh D. N.**
SA generalized methodology for determination of crushing strength of granular materials, *Geotechnical and Geological Engineering*, Volume 25, pp 203-213, 2007.
- Bartake P. P. and **Singh D. N.**
Studies on determination of shear wave velocity in sands, *Geomechanics and Geoengineering: An International Journal*, Volume 2, No 1, 41-49, 2007.
- Bhajantri M. R., **Eldho T. I.** and Deolalikar P. B.
Modeling hydrodynamic flow over spillway using weakly compressible flow equations, *Journal of Hydraulic Research, IAHR*, Volume 45, No 6, pp 844-852, 2007.
- Bhajantri M. R., **Eldho T. I.** and Deolalikar P. B.
Numerical modeling of turbulent flow through spillway with gated operation, *International Journal for Numerical Methods in Engineering*, Volume 72, No 2, pp 221-243, 2007.
- Bhaskararao A. V. and **Jangid R. S.**
Optimum viscous damper for connecting adjacent SDOF structures for harmonic and stationary white-noise random excitations, *Earthquake Engineering and Structural Dynamics*, Volume 36, pp 563-571, 2007.
- Bhosale S. S. and **Mandal J. N.**
Experimental study for evaluating crack retardation of open graded asphalt concrete overlays, *ASTM International, Journal of Testing and Evaluation*, Volume 35, No 6, pp 1-13, 2007.
- Chandramohan P. V., **Eldho T. I.**, **Jothiprakash V.** and **Deo M. C.**
Surge analysis in a large lift irrigation project through physical modeling – A case study, *ISH Journal of Hydraulics Engineering*, Volume 13, No 3, pp 102-114, 2007.
- Charhate S. B., **Deo M. C.** and Kumar V. S.
Soft and hard computing approaches for real time prediction of currents in a tide dominated area, *Journal of Engineering for the Maritime Environment*, Part M, Volume 221, pp 147-163, 2007.

- Choudhury D.**, Shen R. F. and Leung C. F.
Centrifuge model study of pile group due to adjacent excavation, In GEOCONGRESS 2008, Characterization, Monitoring, and Modeling of GeoSystems, *Geotechnical Special Publication No. 179*, ASCE, Volume 179, pp 141-148, 2008.
- Choudhury D.** and Subba Rao K. S.
Generalized solution for seismic uplift capacity of strip anchors using pseudo-static approach, *Journal of Earthquake and Tsunami*, Volume 1, No 4, pp 311-328, 2007.
- Choudhury D.** and Ahmad S. M.
Design of waterfront retaining wall for the passive case under earthquake and tsunami, *Applied Ocean Research*, Volume 29, Nos 1-2, pp 37-44, 2007.
- Choudhury D.** and Ahmad S. M.
Stability of waterfront retaining wall subjected to pseudo-static earthquake forces, *Ocean Engineering*, Volume 34, Nos 14-15, pp 1947-1954, 2007.
- Choudhury D.**, Nimbalkar S. S. and **Mandal J. N.**
External stability of reinforced soil walls under seismic conditions, *Geosynthetics International*, Volume 14, No 4, pp 211-218, 2007.
- Das B. B., **Singh D. N.** and Pandey S. P.
Experimental revalidation of certain durability design provisions for concrete with reference to the Indian code of practice, *Cement Wapno Beton*, Volume XIII/LXXV, No 1, pp 9-18, 2008.
- Deo O., **Jothiprakash V.** and **Deo M. C.**
Genetic programming to predict spillway scour, *International Journal of Tomography and Statistics*, Volume 8, No W08, pp 32-45, 2008.
- Eldho T. I.**, Jha A., Singh A. K. and Jana R.
A GIS and SCS-CN based integrated model for rainfall-runoff simulation of ungauged watershed, *Water and Energy International Journal, CBIP*, Volume 64, No 4, pp 30-39, 2007.
- Erzin Y., Rao B. H. and **Singh D. N.**
Artificial neural network models for predicting soil thermal resistivity, *International Journal of Thermal Sciences*, Volume 47, No 8, 970-982, 2008.
- Geetha K., Mishra S. K., **Eldho T. I.**, **Rastogi A. K.** and Pandey R. P.
SCS-CN based continuous simulation model for hydrologic forecasting, *Jr. Water Resources Management*, Volume 22, pp 165-190, 2008.
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- Ghosh Subimal**, Suresh H. R. and Mujumdar P. P.
Fuzzy waste load allocation model: Application to a case-study, *Journal of Intelligent Systems*, Volume 17, Nos 1-3, pp 283-296, 2008.

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Statistical downscaling of GCM simulations to streamflow using relevance vector machine, *Advances in Water Resources*, Volume 31, No 1, pp 132-146, 2008.

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Urban flood resilience planning and management and lessons for the future: A case of study in Mumbai, India, *Urban Water Journal*, Volume 4, No 3, pp 183-194, 2007 .

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An alternate approach for transient flow modeling in urban drainage systems, *International J. of Water Resources Management*, Volume 21, No 7, pp 1225-1244, 2007.

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Multi-objective particle swarm optimization for generating optimal trade-offs in reservoir operation, *Hydrological Processes*, Volume 21, pp 2897-2909, 2007.

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Optimal reservoir operation for irrigation of multiple crops using elitist-mutated particle swarm optimization, *Hydrological Sciences Journal*, Volume 52, No 4, pp 686-701, 2007.

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Multi-objective differential evolution with application to reservoir system optimization, *Journal of Computing in Civil Engineering*, ASCE, Volume 21, No 2, pp 136-146, 2007.

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An efficient multi-objective optimization algorithm based on swarm intelligence for engineering design, *Engineering Optimization*, Volume 39, No 1, pp 49-68, 2007.

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Optimum lead-rubber isolation bearings for near-fault motions, *Engineering Structures*, Volume 29, pp 2503-2513, 2007.

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Derivation of coastal wind and wave parameters from offshore measurements of Topex satellite using ANN, *Coastal Engineering*, Volume 54, pp 187-196, 2007.

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On accurate stress analysis of composite and sandwich narrow beams, *International Journal for Computational Methods in Engineering Science and Mechanics (IJCMESM)*, Volume 8, No 3, pp 165-177, 2007.

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A new partial finite element model for statics of sandwich plates, *Journal of Sandwich Structures and Materials (JSSM)*, Volume 9, No 5, pp 487-520, 2007.

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A novel finite element-numerical integration model for composite laminates supported on opposite edges, *ASME Journal of Applied Mechanics (ASME-JAM)*, Volume 74, No 6, pp 1114-1124, 2007.

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Two dimensional stress analysis of laminates under thermal loads, *Proceeding of Indian National Science of Academy (INSA)*, Volume 73, No 3, pp 137-145, 2007.

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Kant T., **Desai Y. M.** and Pendhari S. S.

Stress analysis of laminates under cylindrical bending, *Communication in Numerical Methods in Engineering (CNME)*, Volume 24, No 1, pp 15-32, 2008.

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An efficient semi-analytical model for composite and sandwich plates subjected to thermal loads, *Journal of Thermal Stresses (JTS)*, Volume 31, No 1, pp 77-103, 2008.

Kori J. G. and **Jangid R. S.**

Semi-active stiffness dampers for seismic control of structures, *Advances in Structural Engineering*, Volume 10, pp 501-524, 2007.

Lin Y, **Inamdar M.** and Freund L. B., The competition between brownian motion and adhesion in soft materials, *J. Mech. Phys. Sol.*, Volume 56, pp 241-250, 2008.

Maity R. and Nagesh Kumar D.

Hydroclimatic teleconnection between global sea surface temperature and rainfall over India at subdivisional monthly scale, *Hydrological Processes*, Volume 21, No 14, pp 1802-1813, 2007.

Maity R., Nagesh Kumar D. and Nanjundiah Ravi S.

Review of hydroclimatic teleconnection between hydrologic variables and large-scale atmospheric circulation patterns with Indian perspective, *The ISH Journal of Hydraulic Engineering*, Volume 13, No 1, pp 77-92, 2008.

Maity R. and Nagesh Kumar D.

Basin-scale streamflow forecasting using the information of large-scale atmospheric circulation phenomena, *Hydrological Processes*, Volume 22, No 5, pp 643-650, 2008.

Marur S. R. and **Kant T.**

Free vibration of higher-order sandwich and composite arches, Part I: Formulation, *Journal of Sound and Vibration*, Volume 310, pp 91-109, 2008.

Marur S. R. and **Kant T.**

Free vibration of higher-order sandwich and composite arches, Part II: Frequency spectra analysis, *Journal of Sound and Vibration*, Volume 310, pp 110-133, 2008.

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Slope stability-A comparison of probabilistic, possibilistic and hybrid approaches *International Journal of Performability Engineering*, Volume 3, No 2, pp 131-142, 2007.

Mujumdar P. P. and **Ghosh Subimal**

Assessment of impact of global climate change on precipitation at regional scales, *Hydrology Review*, Volume 22, pp 21-36, 2007.

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Multipurpose reservoir operation using particle swarm optimization, *Journal of Water Resources Planning and Management, ASCE*, Volume 133, No 3, pp 192-201, 2007.

Nagesh Kumar D., **Janga Reddy M.** and **Maity R.**

Regional rainfall forecasting using large scale climate teleconnections and artificial intelligence techniques, *Journal of Intelligence Systems*, Volume 16, No 4, pp 307-322, 2007.

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Sliding stability and seismic design of retaining wall by pseudo-dynamic method for passive case, *Soil Dynamics and Earthquake Engineering*, Volume 27, No 6, pp 497-505, 2007.

Nimbalkar S. S. and **Choudhury D.**

Effect of body waves and soil amplification on seismic earth pressures, *Journal of Earthquake and Tsunami*, Volume 2, No 1, pp 1-20, 2008.

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Single basin jet flocculator, *Journal of Hydro-environment Research*, IAHR, Volume 1, pp 1-11, 2007.

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Application of composite materials in civil engineering: A general review, *Composite Structures*, Volume 84, No 2, pp 114-124, 2008.

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Strength statistics of adhesive contact between a fibrillar structure and a rough substrate, *Journal of the Royal Society Interface*, Volume 5, No 21, pp 441-448, 2008.

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Accelerated diffusion test on the intact rock mass, *Journal of Testing and Evaluation*, ASTM, Volume 35, No 2, pp 111-117, 2007.

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Application of impedance spectroscopy for modeling flow of AC in soils, *Geomechanics and Geoengineering: An International Journal*, Volume 2, No 3, pp 197-206, 2007.

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Sandeep Patil, **Rastogi A. K.**, Zhang Q. H., Misra Rajeev, Ukarande S. K.

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Optimal control of pretwisted shearable smart composite rotor blades, *Acta Mechanica*, Volume 191, pp 37-58, 2007.

Shinde A. and **Mandal J. N.**

Behavior of reinforced soil retaining wall with limited fill zone, *International Journal of Geological and Geotechnical Engineering*, Volume 25, No 6, pp 657-672, 2007.

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Neural network – genetic programming for sediment transport, *Journal of Maritime Engineering*, Volume 160, Issue MA3, pp 113-119, 2007.

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The effect of spatial correlation of cone tip resistance on the bearing capacity of shallow foundations, *Geotechnical and Geological Engineering, An International Journal, Springer*, Volume 26, No 1, pp 37-46, 2008.

Sivakumar Babu G. L., Rao R. S. and **Dasaka S. M.**
Stabilisation of vertical cut supporting a retaining wall using soil-nailing technique – A case study, *Ground Improvement, Thomas Telford*, Volume 11, No 3, pp 157-162, 2007.

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Passive hybrid systems for earthquake protection of cable-stayed bridge, *Engineering Structures*, Volume 29, pp 57-70, 2007.

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Computation of hydraulic conductivity of montmorillonitic clays by diffuse double layer theory, *International Journal of Geotechnical Engineering*, Volume 2, No 1, pp 1-10, 2008.

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Robust network design problem under demand uncertainty using an evolutionary algorithm, *Computer-Aided Civil and Infrastructure Engineering*, Volume 22, pp 6-18, 2007.

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A case study on road reinforced with polypropylene geotextile, *The Economic Times Polymers Journal*, Volume 11, pp 22-25, 2007.

National Conference Papers

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Monthly reservoir inflow prediction with time lagged recurrent neural network, *Proceedings of the National Conference on Hydraulics and Water Resources, HYDRO 2007*, National Institute of Technology Surat, pp 608-614, December 21-22 2007.

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Artificial neural networks mode to predict pan evaporation time series, *Proceedings of the National Conference Spatial Modelling and Soft Computing in Water Resources Management SSWRM-2008*, Annamalai University, Chidambaram, Tamil Nadu, March 14-15, 2008.

Juneja A.

Engineering properties of soft marine clays at Visakhapatnam Port, *Proc. Asian Regional Conf.*, Kolkata, Volume 1, pp 58-61, May 1-11, 2007.

Juneja K. L. and **Juneja A.**

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Juneja A.

Study on the effects of sand compaction pile installation using the centrifuge, *Proc. Intern. Conf. on Civil Engg .in the New Millennium: Opportunities and Challenges*, Kolkata, 2007.

Kant T.

Macro-thermo-mechanics of polymer composite laminates, Proceedings, *National Conference on Emerging Trends in Civil Engineering for Infrastructure Development*, National Institute of Technology Raipur, February 15-16, 2008.

Khedkar M. S., **Mandal J. N.** and Shin E. C.

Design of geofabric embankment on soft soil, *13th Asian Regional conference on Soil mechanics and Geotechnical Engineering*, Kolkata, India, pp 1001-1004, December 10-14, 2007.

Khedkar M. S., Bhosale S. S., Soni J. K., Shinde A. L. Bhardwaj O.K., Jain A. and **Mandal J. N.**

The exciting development of new technology of geosynthetics in civil engineering, *National conference on Emerging technology in civil engineering, NCTCTE-2008*, P. Dr. V. V. Patil college of engineering, Ahemadnagar, Maharashtra, India, February 28-29, 2008.

Kote A. and **Jothiprakash V.**

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Magar R. and **Jothiprakash V.**

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Maity R.

An Introduction to climate forcing on hydrologic variables, *Proceedings of the national conference on Hydraulics and Water Resources, HYDRO - 2007*, SVNIT, Surat, pp 40-46, December 21-22, 2007.

Mallika S., Srividya A. and **Venkatachalam G.**

An application of the shear strength reduction technique to tunnel stability, *Proc. Silver Jubilee Conference on Geotechnical Engineering Experiences and Practices (Geotechnica 2007)*, CSMRS, New Delhi, Volume 1, pp 57-61, May 1-11, 2007.

Modi D., **Choudhury D.** and Subba Rao K. S.

Simplified analysis of seismic slope stability by using pseudo-static approach, *Proc. of National Conference on Foundations and Retaining Structures (NCFRS-2007)*, IIT Roorkee, India, Volume 1, pp 114-117, May 23-24, 2007.

Rajesh S., **Viswanadham B. V. S.** and Sreeram J.

Development of model municipal solid waste for Indian scenario – a case study, *First Indian Young Geotechnical Engineers Conference*, Hyderabad, India, pp 113-120, May 1-11, 2007.

Rastogi A. K.

Controlled subsurface recharge schemes to enhance groundwater storage in aquifers, *Proc. 1st World Aqua Congress*, 15 – 24, Aqua Foundation, World Habitat Centre, New Delhi, November 28-30, 2007.

Savoikar P. P. and **Choudhury D.**

Earthquake hazards on municipal solid waste landfills: an overview, *Symposium on Engineering of Ground & Environmental Geotechnics (SEG2-2008)*, JNTU Kukatpallay, Hyderabad, India, pp 250-255, February 29-March 1, 2008.

Ustoorikar K. S. and **Deo M. C.**

Spatial mapping of wave heights, *Proceedings, HYDRO-2007 conference*, NIT Surat, pp 601-614, December 21, 2007.

Venkatachalam G.

Mathematical modelling in landslide studies, *Proc. Diamond Jubilee Conference on Landslide Management- Present Scenario and Future Directions*, (in print), CBRI, Roorkee, February 1-11, 2008.

Viswanadham B. V. S. and Khachane. S.

Studies on slopes stabilized by using vertical piles in a geocentrifuge, *Proc. 13th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering*, Allied Publishers Private Limited, Kolkata (Pubs.) Volume I – Part II, pp 885-888, May 1-11, 2007.

International Conference Papers

Arpita M. and **Eldho T. I.**

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Bambole A. N. and **Desai Y. M.**

Novel hybrid-interface formulation for statics of angle-ply laminates, *15th International Conference on Composite Engineering (ICCE-15)*, Hainana, China, July 1-11, 2007.

Chandiramani N. K. and Librescu L. I.

Optimal control of a pretwisted tapered rotating beam with tip rotor, *Proceedings of the 14th International Congress on Sound and Vibration (ICSV14)*, Cairns, Australia, July 9-12, 2007.

Charhate S. B. and **Deo M. C.**

Application of genetic programming to solve coastal and ocean engineering problems, *Proceedings of The International Workshop on Advances in Hydroinformatics*, Niagara Falls, Canada, pp 1-14, June 4-7, 2007.

Choudhury D.

Analysis of waterfront retaining structures during earthquake and tsunami, *13th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering (13ARC-2007)*, Kolkata, India, Volume 1, Part II, pp 955-958, December 10-14, 2007.

Choudhury D. and Nimbalkar S.

Determination of point of application of seismic active thrust on retaining wall, *4th International Conference on Earthquake Geotechnical Engineering (4ICEGE-2007)*, Thessaloniki, Greece, June 25-28, 2007.

Das B. B., Valluri S. and **Singh D. N.**

Determination of porosity, pore size and pore distribution of compacted soils, *Proceedings of the Sri Lankan Geotechnical Society, First International Conference on Soil & Rock Engineering*, Colombo, Sri Lanka, August 5-11, 2007.

Dasaka S. M. and Zhang L. M.

Scale effect on the estimation of spatial correlation structure of soil and rock, *Proceedings First Sri Lankan Geotechnical Society International Conference on Soil and Rock Engineering*, Colombo, August 6-11, 2007.

Dave U. V. and **Desai Y. M.**

Interaction between heating-cooling cycles, sodium sulfate and external loading of concrete with and without polypropylene fibre reinforcement, *International Conference of Advances in Concrete*, Washington DC, USA, September 1-11, 2007.

Dave U. V. and **Desai Y. M.**

Effect of polypropylene and glass fibres on various strengths of ordinary and standard concrete, *International Conference of Advances in Concrete*, Washington DC, USA, September 1-11, 2007.

Desai P. and **Kant T.**

Thermoelastic solutions for finite length functionally graded axisymmetric orthotropic cylinders, *Proc. International Conference on Recent Developments in Structural Engineering (RDSE-2007)*, Department of Civil Engineering, Manipal Institute of Technology, Manipal, pp 185, August 30-September 1, 2007.

Eldho T. I.

Sustainable water management and pollution abatement through common effluent treatment plants in industrial areas, *Pro. World Water Week and Stockholm Water Symposium*, Stockholm, August 12-18, 2007.

Eldho T. I. and Tiwari P.

Experimental & numerical investigation on scour caused by multiple wall jets, *Proc. Fifth Int. Symposium on Environmental Hydraulics*, Tempe, Arizona, USA, December 4-7, 2007.

Ghosh S. and Prasanth T.

Estimation of hysteretic energy demand using concepts of modal pushover analysis, *International Conference on Computational Methods in Structural Dynamics and*

Earthquake Engineering (COMPDYN 2007), Rethymno, Crete, Greece, June 13-16, 2007.

Gundaliya P. J., **Mathew T. V.** and **Dhingra S. L.**

Heterogeneous traffic representation for micro simulation, *11th World Conference on Transport Research WCTR conference*, UC Berkeley, USA, June 24-28, 2007.

Jothiprakash V. and Kalkutki S.

Past, present and future of rainfall-runoff modeling, *International Conference on Water Management and Technology Applications in Developing Countries, WATER MALAYSIA 2007*, Kuala Lumpur Convention Centre, Malaysia, May14-16, 2007.

Kant T. and Pendhari S. S.

Partial finite element discretization in elastostatics – a new concept, *Proc. 21st Canadian Congress of Applied Mechanics (CANCAM 2007)*, Department of Mechanical & Industrial Engineering, Ryerson University, Toronto, Ontario, Canada, June 3-7, 2007.

Kant T.

A recent advance in computational mechanics of laminated composites, Keynote Lecture, *Proc. International Conference on Recent Developments in Structural Engineering (RDSE-2007)*, Department of Civil Engineering, Manipal Institute of Technology, Manipal, pp 16-30, August 30-September 1, 2007.

Kant T. and Pendhari S. S.

A partial discretization in elastostatics for layered media, *Proc. International Conference on Multiscale Modeling and Simulation (ICMMS-08)*, Indian Institute of Science, Bangalore, January 2-4, 2008.

Kant T.

Macro-thermo-mechanics of polymer composite laminates, *Proc. National Conference on Emerging Trends in Civil Engineering for Infrastructure Development*, National Institute of Technology Raipur, February 15-16, 2008.

Khedkar M. S. and **Mandal J. N.**

Pullout response study for cellular reinforcement, *proceedings of 5th International symposium on Earth Reinforcement IS Kyushu/07, New horizons in earth reinforcement*, Fukuoka, Japan, pp 293-298, November 14-16, 2007.

Kuriachan S., **Eldho T. I.** and Lali Neera A.

Assessment of long term effects of industrial pollution on groundwater system and remediation by natural attenuation, *Proc. Int. Conf. on Groundwater Dynamics & Global Change*, Jaipur, 19-22, March 2008.

Madhekar S. N. and **Jangid R. S.**

Seismic response control of bridges using hybrid systems, *8th Pacific Conference on Earthquake Engineering*, Singapore, December 5-7, 2007.

Matsagar V. A. and **Jangid R. S.**

Response of seismically isolated shear beam to impact forces, *9th International Symposium on Plasticity and Impact Mechanics (IMPLAST 2007)*, Bochum, pp 335-342, August 21-24, 2007.

Matsagar V. A. and **Jangid R. S.**

Pounding in plan-wise asymmetric seismically isolated building, *10th World Conference on Seismic Isolation, Energy Dissipation and Active Vibrations Control of Structures*, Istanbul, Turkey, May 28-31, 2007.

Madhekar S. N. and **Jangid R. S.**

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Mohrlok, U., Heinrich, K., Kirubaharan, S., **Eldho, T.I.** *Tracer tests in vertical groundwater circulation flow fields*. In Geophysical Research Abstracts, Vol. 9, EGU General Assembly, Vienna, Austria, May 1-11, 2007.

Naik M. G., **Rao E. P.** and **Eldho T. I.**

Watershed modeling for soil erosion and sediment yield processes, *Proc. International Workshop on Complex Systems in Fluid Flows and Sedimentation Processes (IWCSFFS-07)*, Indian Statistical Institute, Kolkata, August 27-31, 2007.

Naik M. G., **Rao E. P.** and **Eldho T. I.**

Soil erosion and sediment yield modelling of watershed using FEM, remote sensing and GIS, *Proc. XXXII World IAHR Congress*, Venice, July 1-6, 2007.

Patil S., Singh V. P. and **Rastogi A. K.**

Monami waves in submerged vegetation, *Proc. 6th International Symposium on Stratified Flows – IAHR*, School of Environmental System Engineering, Univ. of Western Australia, Perth, Australia, pp 348-353, December 11-14, 2006.

Radhakrishnan P. and **Mathew T. V.**

Simulation modeling of heterogeneous traffic at an urban signalized intersection, *10th International Conference on Application of Advanced Technologies in Transportation (AATT-08)*, Athens, May 27-31, 2008.

Rajesh S. and **Viswanadham B. V. S.**

Comparison of settlements in conventional and bioreactor landfills – A review, *Proc. Geotechnica 2007*, pp 387-396, May 1-11, 2007.

Samui P., Bhattacharya G. and **Choudhury D.**

Prediction of ultimate capacity of laterally loaded piles in clay: a relevance vector machine approach, *12th Online World Conference on Soft Computing in Industrial Applications (WSC12-2007)*, October 16-26, 2007.

Sharma S. and **Mathew T. V.**

Transportation network design considering emissions as bilevel optimization problem, *86th Annual Meeting of Transportation Research Board*, Washington D.C., January 20-24, 2007.

Sharma S. and **Mathew T. V.**

Modified link cost function for sustainable transportation network, *11th World Conference on Transport Research WCTR conference*, UC Berkeley, USA, June 24-28, 2007.

Singh D. N. and Rao H. B.

Modeling techniques for geoenvironmental engineering problems, *KGS Fall National Conference 2007*, Busan, Korea, September 14-15, 2007.

Sreedeeep S. and **Singh D. N.**

A study on the correlation between physical properties of the soil and soil-water characteristic curve, *Proc. of the Sri Lankan Geotechnical Society, First International Conference on Soil & Rock Engineering*, Colombo, Sri Lanka, August 5-11, 2007.

Venkatachalam G.

Application of reliability analysis in geotechnical engineering, *Proc. International Conference on Reliability Safety and Quality Engineering (Quantitative Approaches to Enhance the Performance and Safety of Complex Systems(ICRSQE-2008))*, Nuclear Power Corporation of India Limited, January 5-7, 2008.

Viswanahdam B. V. S. and Satkalmi V.

Field trials with polypropylene woven geotextiles, *Proc. First Pan American Geosynthetics Conference and Exhibition*, Geoamerica 2008, pp 1112-1118, March 2-5, 2008.

Viswanadham B. V. S., Rajesh S., Gourc J. P. and Camp, S.

Some studies on deformation behaviour of clay liners of landfills: Centrifuge and Full-scale tests – Influence of reinforcement inclusion, *Proc. New horizons in Earth Reinforcement*, J. Otani, Y. Miyata and T. Mukunoki (Eds.), Taylor and Francis (Pubs.), pp 639-644, May 1-11, 2007.

Honorary Works

Chandiramani N. K.

Examiner of PhD thesis, IISc Bangalore, Department of Mechanical Engineering.

Served on selection committee for an Engineering college in Mumbai

Choudhury D.

Reviewer of Canadian Geotechnical Journal, Soil Dynamics and Earthquake Engineering, Journal of Geotechnical and Geoenvironmental Engineering, ASCE, International Journal of Physical Modelling in Geotechnics, Computer-Aided Civil and Infrastructure Engineering, Geosynthetics International Journal of Earth System Sciences, Current Science, Journal of Institute of Engineers and Indian Geotechnical Journal

Examiner of Ph.D. thesis submitted to University of Wollongong, NSW, Australia and Indian Institute of Science, Bangalore, India.

Reviewer for Conference papers of (i) 12th International Conference of International Association for Computer Methods and Advances in Geomechanics (12IACMAG), October 1 - 6, 2008, Goa, India organized by IACMAG, USA. (ii) Geotechnical Earthquake Engineering and Soil Dynamics IV (GEESD-2008), May 18 - 22, 2008, Sacramento, California, USA organized by GI-ASCE and (iii) The Challenge of Sustainability in the Geoenvironment, Annual Congress of the Geo-Institute of ASCE (GeoCongress-2008), March 9-12, 2008, New Orleans, Louisiana, USA organized by GI-ASCE.

Expert Member of the Board of Research and Studies for North Maharashtra University (NMU), Jalgaon, nominated by Hon'ble Vice Chancellor of NMU.

Dasaka S. Murty

Member of Organizing Committee, Indian Geotechnical Conference-2008, Indian Geotechnical Society, India.

Reviewer of ASCE Journal of Materials, Canadian Geotechnical Journal, Georisk – An International Journal.

Deo M. C.

President, The Indian Society for Hydraulics

Associate Editor of ASCE Journal of Computing in Civil Engg.

Editor, Special Issue – 2007 of the ISH Journal of Hydraulic Engineering, Pune

Member, Editorial Board of the International Journal of Ships and Offshore Structures, Taylor and Francis, U. K.

Member, Editorial Board of the Open Ocean Engineering Journal, Bentham Press, Oxford, UK. (www.bentham.org/open/tooej)

Member, Editorial Board of the Journal of Advances in Civil Engineering, Hindawi Pub. Corp. New York <http://www.hindawi.com/journals/ace/>

Member, Editorial Board of Civil-Comp conference 2007, U. K.

Chairman of HYDRO-2007 Conference, NIT Surat, December 21-22, 2007

Member, Best Paper Prize Committee, ASCE Journal of Computing in Civil Engg.

Member, Advisory Board, National Water Academy, Ministry of Water Resources

Member, Advisory Board, Indian National Committee for Hydraulics, Ministry of Water Resources

Member, Faculty selection Committees of NIT Surathkal

Reviewed papers for following Journals:

Hydrological Processes, Elsevier
International Journal of Ecology and Development
Computers and Geosciences, Elsevier
International Journal of Numerical and Analytical Methods in Geomechanics
Advances in Engineering Software, Elsevier
Ocean Engineering, Elsevier
Applied Soft Computing, Elsevier
Civil Engineering and Environment System, Elsevier
Water Resources Research, AGU, USA
Journal of Hydroinformatics, IWA
International Journal of Computer aided Engg. and Software
Journal of Atmospheric and Ocean Technology, AMS
Water Management, Institution of Civil Engineers, London
International Journal of Ships and Offshore Structures
Earth system Science, Elsevier

Examiner of Ph D theses submitted to IIT Madras, IIT Roorkee, IISc Bangalore, VNIT Nagpur

Eldho T. I.

Executive Council Member, Indian Society of Hydraulics, Pune

Referee Ph.D. Thesis, IIT Khragpur; IIT Roorkee; Swami Ramanad Teerth Marathwada University, Nanded

Reviewed research papers for the following Journals:

ASCE International Journal of Irrigation and Drainage
International Journal of Water, Air and Soil Pollution
Journal Institution of Engineers India (Civil Engineering Section)
Journal Hydraulics Research, IAHR
Journal of Environmental Monitoring and Assessment
Journal of Environmental Modeling and Software
ASCE Practice Periodical of Hazardous, Toxic and Radioactive Waste Management
ISH Journal Hydraulics Engineering
Journal of Advances in Water Resources
Journal of Sadhana, Indian Academy of Sciences
Journal of Water Management, Institution of Engineers, UK
Journal of Hydro-environment Research
Journal of Sediment Research
International Journal of Water and Environmental Management
Journal of Water Resources Management
International Journal of Hydrologic Processes
International Journal of Ecology & Development
International Journal Environment and Waste Management

Ghosh Siddhartha

Reviewed manuscripts for the International Journal of Performability Engineering

Worked as the departmental representative of the IIT Bombay Research Fellowship and Summer Internship scheme (2006-2007)

Ghosh Subimal

Reviewer of International Journal named Water Resources Management (Springer)

Gupta K.

Member of Editorial Board of Urban Water Journal

Peer reviewer for international archival journals

Member of three International working groups of the IAHR/IWA joint committee on Urban Drainage:

1. Sewer Systems and Processes Working Group (SS&PWG),
2. Urban Rainfall Group (URG)

Member, Expert Committee on preparation of Guidelines on Urban Flood Disaster Management, NDMA

Member, Expert committee for preparation of Manual on Urban Drainage, Ministry of Urban Development, Govt. of India

External Examiner for Ph D thesis of IIT Kharagpur/ IIT Delhi

Internal examiner for Ph D/ M Tech for CESE/Civil Engineering Department students

Referee for international archival journals

Janga Reddy M.

Reviewed technical papers for Journals IEEE Transactions on Evolutionary Computation, Institution of Engineers (India), Journal of Civil Engineering, ISH Journal of hydraulic engineering

Reviewed project reports for Rajiv Gandhi Science & Technology Commission, Govt. of Maharashtra, Mumbai

Jangid R.S.

Reviewer for research papers of ASCE Journal of Structural Engineering, Soil Dynamics and Earthquake Engineering, Journal of Sound and Vibration, Wind and Structures, Advances in Structural Engineering-An International Journal, Engineering Structures, International Journal of Solids and Structures and Finite Elements in Analysis

Editorial board Member of The Open Ocean Engineering Journal

Editorial board Member of The Open Construction and Building Technology Journal

Board member of ETC Network Limited

Jothiprakash V.

Reviewed the papers for the following journals

International Journal of Water

International Journal of Agricultural Science and Technology

IAHR Journal of Hydraulic Environmental Systems

Journal of Institution of Engineers (India) Civil Engineering Division.

International Journal of Environmental Informatics, (International Society for Environmental Informatics) Canada

Water Resources Management (Springer Publications)

Expert Committee member for evaluation of Sangli City interception and diversion work, Environmental Department, Government of Maharashtra.

Co-opted Member Indian Society for Hydraulics, Pune.

Member DUGC (Departmental Under Graduate Committee) from Jan 2007 to till date

Departmental Library in-charge, Dept. of Civil Engg., IIT Bombay, Aug 2005 to till date.

Juneja A.

Reviewer of Geotechnical Testing Journal and Journal of Materials in Civil Engineering, ASCE

Kant T.

Fellow of Indian National Science Academy (INSA, Indian Academy of Science (IASc) and Indian National Academy of Engineering (INAE)

Member of National Committee of IUTAM and Engineering Science Committee of IASc

Member of Editorial Boards of Computer Modeling in Engineering Science (CMES), Structural Engineering and Mechanics (SEM) and International Journal for Computational Methods in Engineering Science and Mechanics (IJCMESM)

Reviewer for several journals

Member of BW&C of National Institute of Industrial Engineering (NITIE), AICTE, UGC, IIT review/selection committees

Maity R.

Reviewer of ASCE Journal of Hydrologic Engineering, Journal of the American Water Resources Association, Journal of Indian Society of Hydraulics

Mathew T. V.

Examiner of M. S. Thesis, NIT Surat 2007, IIT Madras 2007, IIT Madras 2008

Reviewer for the Journal of Heuristics

Reviewer for the International conferences: TRB-2007, AATT-08

Member of organizing committee for 7th International Workshop on Transportation Planning & Implementation Methodologies for Developing Countries (TPMDC) December 2006, organised by Transportation Systems Engineering of Civil Engineering Department of IIT Bombay

Rao E. P.

Reviewer of Journal of Earth System Science

Rastogi A. K.

Referee for Internal Promotion of Faculty at IISc

Examiner of external Ph.D. thesis submitted to IIT Delhi

Chairman Ph.D. viva

Expert at UPSC Selection committee, New Delhi, February 28-29, 2008

Reviewer of Hydrogeology Journal, ISH-Jr. of Hydr. Engg., Journal of Hydrology, Jr. of Inst. of Engineers-Civil Engg. Divn, Hydrological Processes, Journal of Hydro-Environment Research and ASCE Practice Periodical of Hazardous, Toxic and Radioactive Waste Management

Reviewer of papers of conference IACMAG 2008

Reviewer of the Indian National Committee on Hydrology (INCOH) Project Reports

Chaired a session in the International Groundwater Conference 2008, Jaipur, March 19-22, 2008.

Singh D. N.

Appointed as Editorial Board Member, Geotechnical Testing Journal, ASTM International

Expert Gap Analysis meeting, Civil Engineering Department, College of Engineering Pune, October 6, 2007,

Expert Career Advancement Scheme meeting, College of Engineering Pune, August 31, 2007,

Expert TPDM-2005, 2007 BRNS projects

Expert reviewer Technopreneur Promotion Programme (TePP), a novel activity jointly operated by Department of Scientific & Industrial Research (DSIR) and TIFAC to tap the vast Innovative Potential of the Citizens of the country

Expert reviewer Indian National Committee on Geotechnical Engineering, Ministry of Water Resources, Central Soil & Materials Research Station, New Delhi

Venkatachalam G.

Referee for Ph.D Theses

Member, Editorial Committee, Journal of Rock Mechanics and Tunnelling Technology

Member, Selection Committees

Member, Experts Committee, KRCL for advising on remedial measures for track-formation subsidence

Member, Peer Review Committee, MSRDC, for advising on landslide and rockfall protection along Pune Bombay Expressway

Member, Rock Mechanics Sectional Committee 48, Sub-Committee 48:3 on Underground Openings and Field Monitoring, Bureau of Indian standards

Member, Soil and Foundation Engineering Sectional Committee CED 43, Sectional Committee on Rock Mechanics, Bureau of Indian Standards

Chaired Session in Diamond Jubilee Conference on Landslide Management, CBRI, February 2008

Chaired a Session in International Conference on Reliability Safety and Quality Engineering (Quantitative Approaches to Enhance the Performance and Safety of Complex Systems (ICRSQE-2008), Nuclear Power Corporation of India Limited, January 5-7, 2008

Invited Lectures

Choudhury D.

Seismic Design of Retaining Structures – Recent Developments, Department of Civil and Environmental Engineering, Rensselaer Polytechnic Institute (RPI), Troy, NY 12180, USA, March, 2008

Geotechnical Earthquake Engineering and its Applications, Department of Applied Mechanics, MAEER's MIT, Pune, India, February, 2008

Introduction to Geotechnical Earthquake Engineering and its Applications, Department of Applied Mechanics, College of Engineering, Pune, India, December, 2007

Need for Revisions in IS codes for Earthquake Resistant Design of Geotechnical Structures, National Disaster Management Authority (NDMA), New Delhi, India, April, 2007

Dasaka S. Murty.

Risk Assessment and Management in Geotechnical Earthquake Engineering for CEP course on Geotechnical Earthquake Engineering at L. D. College of Engineering, Ahmedabad, February 26, 2008.

Field Investigations in Geotechnical Engineering during National Workshop on Training for Field and Practicing Engineers in Geotechnical and Transportation Engineering at MANIT, Bhopal, December 4, 2007.

Dewatering Techniques for Construction Sites as part of training programme for Engineers of Nagarjuna Construction Company (NCC), IIT Bombay, August 21, 2007.

Site Investigation and Design of Foundations during training programme for Engineers of Nagarjuna Construction Company (NCC), IIT Bombay, August 20, 2007.

Deo M. C.

Application of Genetic Programming to Solve Coastal and Ocean Engineering Problems Niagara Falls, Canada, June 4-7, 2007

Real Time Wave Forecasting System for The Indian Coastline Using ANN, NIT Surathkal, December 12-14, 2007

Neural Networks – Overview and Applications, Maharashtra Institute of Technology, Pune, March 28, 2008

Eldho T. I.

Distributed Rainfall Runoff Modeling of Watershed Using Finite Element Method, Remote Sensing and Geographical Information Systems, Department of Civil Engineering, IIT Kharagpur, July 27, 2007

India's Water Resources and Prospects of Interlinking of Indian River Basins, Department of Civil Engineering, University of Karlsruhe, Germany, July 5, 2007.

Flooding Problems in Mumbai and Urban Drainage Design, Research Group Meeting of Shakti Project in Karlsruhe, University of Karlsruhe, Germany, July 5, 2007.

Groundwater Pollution Problems due to Industrialization, Department of Geology, University of Karlsruhe, Germany, June 28, 2007.

Ghosh Siddhartha

Seismic Retrofitting, Govt. College of Engineering, Pune, December 21, 2007

Design with Fe500 Super-Ductile Rebar, Tata Steel's Annual Meet, Ahmedabad, February 26, 2008

Ghosh Subimal

Computing in Water Resources and Environmental Engineering in Department of Civil Engineering, Jadavpur University, Kolkata, March 7, 2008

Gupta K.

Urban Flood Disaster Management and Mitigation in technical workshop on Sewerage and Drainage at India Urban Space 2007, Mumbai, September 28, 2007

Janga Reddy M.

Introduction to Genetic Algorithms for QIP/CEP short term course on "Soft Computing Techniques in Water Resources Management", IIT Bombay, Mumbai, November 23, 2007

Jothiprakash V.

Dreams and Reality of Nanotechnology and its Application in Water Resources, Key Notes in National Conference on Nanotechnology and its Application in Water Resources and Environmental Engineering, SRM Deemed University, 29th Sep 2007.

Rainfall-Runoff Modeling Techniques Key note in National Conference Spatial Modelling and Soft Computing in Water Resources Management SSWRM-2008, 14th-15th, March 2008, Annamalai University, Chidambaram (near Chennai), Tamil Nadu

Juneja A.

Beyond Mohr-Coulomb: Modelling Real Soil Behaviour using Plaxis, during the IGS (Mumbai) and IIT Bombay workshop on Plaxis FE programming, April 2008

Modelling of Geotechnical Construction Processes on the Centrifuge, during the course on Recent Development in Geotechnical Engineering, December 2007

Maity R.

Incorporation of Climate Change Effect for Indian Hydroclimatology for QIP/CEP short term course on “Soft Computing Techniques in Water Resources Management” held at Kanwal Rekhi School of Information Technology (KReSIT), IIT Bombay, Powai, Mumbai on November 23, 2007.

Mandal J. N.

Use of Prefabricated Vertical Drains (PVD) in Land Reclamation Projects, National symposium on ground improvement techniques, BIT Durg, India, February 2-3, 2008

Reinforced Wall with Restricted Backfill Zone in Urban Areas, Saint Petersburg, Russia, June 16-19, 2008

Mathew T. V.

Intelligent Transportation Systems on behalf of CDAC-Trivandrum and Department of Information Technology, April 2007

Rao E. P.

Soft Computing Techniques in Water Resources Management, Civil Engineering Department, IIT Bombay, Mumbai, November 2007

Rastogi A. K.

Modeling Hydrological Systems at Imphal in DST Training Course, May 29-30, 2007

Key Note Address at National Conference on Emerging Technologies in Civil Engineering Organised by PVVP College of Engineering, Ahmednagar February 28-29, 2008

Invited for Academic Evaluation of SGGIS Institute of Engineering and Technology Nanded, June 25-26, 2007

Singh D. N.

Recent Developments in Civil Engineering-Environmental Geomechanics, Key Note Speaker, Structural Engineers World Congress [SEWEC-2007], Bangalore, November 2007

Effective Use of Industrial Wastes in Geotechnical Engineering at AISSMS, College of Engineering, Pune

Environmental Geotechnics at Seoul National University, Department of Civil Engineering

Environmental Geomechanics: A Recent Development in Geotechnical Engineering at JNTU College of Engineering, Anantpur

Venkatachalam G.

Principles of Centrifuge Modelling and Relevance to Geotechnical Engineering Practice in DST-Short Term course on “Application of Centrifuge Modelling to Geotechnical Engineering Practice”, IIT Bombay, November 13-18, 2007.

Participation/Organization of Conference

Chandiramani N. K.

14th International Congress on Sound and Vibration (ICSV14), Cairns, Australia, July 9-12, 2007.

Choudhury D.

GeoCongress-2008, an annual conference of Geo-Institute (GI) of American Society of Civil Engineers (ASCE), USA, March 9-12, 2008.

13th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering (13ARC-2007) of ISSMGE, Kolkata, India, December 10-14, 2007.

National Conference on Foundations and Retaining Structures (NCFRS-2007), IIT Roorkee, India, May 23-24, 2007.

Dasaka S. Murty

First Sri Lankan Geotechnical Society International Conference on Soil and Rock Engineering, Colombo, Sri Lanka, August 6-11, 2007.

Co-chaired a session in First Sri Lankan Geotechnical Society International Conference on Soil and Rock Engineering, Colombo, Sri Lanka.

A workshop on Microzonation, Indian Institute of Science, Bangalore, India, June 26-27, 2007.

Eldho T. I.

International Conference on Groundwater Dynamics & Global Change, Jaipur, 19-22, March 2008.

HYDRO 2007 National Conference, ISH, Surat, December 21-22, 2007.

World Water Week and Stockholm Water Symposium, Stockholm, August 12-18, 2007.

International Workshop on Complex Systems in Fluid Flows and Sedimentation Processes (IWCSFFS-07), Indian Statistical Institute, Kolkata, August 27-31, 2007.

Chaired a Session in HYDRO2007 National Conf., ISH, Surat, December 21-22, 2007.

Ekalavya Channel, Door Darshan, Telecasted the Video Course on “Fluid Mechanics”, (42 Lectures) in August-October, 2007.

Ghosh Siddhartha

International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2007), Rethymno, Crete, Greece, June 13-16, 2007.

International Workshop on Earthquake Hazards and Mitigation (EHAM 07), Guwahati, India, December 6-8, 2007.

Janga Reddy M.

3rd Indian International Conference on Artificial Intelligence (IICAI-2007), Pune, India, December 17-19, 2007.

National Conference on Hydraulics & Water Resources Engineering (HYDRO-2007), at SVNIT, Surat, India, December 21-22, 2007.

Jangid R. S.

9th *International Symposium on Plasticity and Impact Mechanics (IMPLAST 2007)*, Bochum, August 21-24, 2007.

Jothiprakash V.

International Conference on Water Management and Technology Applications in Developing Countries, WATER MALAYSIA 2007, Kuala Lumpur Convention Centre, Malaysia during May 14-16, 2007.

National Conference on Nanotechnology and its Application in Water Resources and Environmental Engineering, SRM Deemed University, September 28-29, 2007.

National Conference, on Hydraulics and Water Resources, HYDRO-2007, SVNIT Surat, December 21-22, 2007.

National Conference Spatial Modelling and Soft Computing in Water Resources Management SSWRM-2008, Annamalai University, Chidambaram (near Chennai), Tamil Nadu, March 14-15, 2008.

Maity R.

National Conference on Hydraulics & Water Resources Engineering (HYDRO-2007), at SVNIT, Surat, India, December 21-22, 2007.

Mathew T. V.

11th World Conference on Transport Research WCTR conference, UC Berkeley, USA, Jun 24-28, 2007.

Rastogi A. K.

Asia – Oceania Geosciences meet (AOGS), 2007, held at Queen Sirikit National Convention Centre, Bangkok, July 30-August 4, 2007.

1st World Aqua Congress, Aqua Foundation, World Habitat Centre, New Delhi, November 28-30, 2007

International Groundwater Conference 2008 on Groundwater Dynamics and Global Change, Jaipur, March 19-22, 2008.

Singh D. N.

Korean Geotechnical Society Conference-2007, Busan, Korea, September 14, 2007.

Organizing 12th IACMAG Conference, Goa, October 1-6, 2008.

Venkatachalam G.

Silver Jubilee Conference on Geotechnical Engineering Experiences and Practices (Geotechnica 2007), CSMRS, New Delhi, May 2007.

Diamond Jubilee Conference on Landslide Management- Present Scenario and Future Directions, CBRI, Roorkee, February 2008.

Specializations of the Faculty

K. M. Bajoria, PhD (Cambridge)

Associate Professor

Structural engineering: Computer aided design, Non-linear analysis, Nuclear structures.

P. Banerji, PhD (Berkeley)

Professor

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

N. K. Chandiramani, PhD (Virginia Tech)

Associate Professor

Structural engineering: Nonlinear dynamics; Stability and control; Computational mechanics; Solid mechanics

D. Choudhury, PhD (IISc Bangalore)

Associate Professor

Geotechnical engineering: Geotechnical Earthquake Engineering, Earth retaining structures, Slope Stability, Anchor, Pile, Bearing capacity problems, Centrifuge Modeling, Fundamentals of soil behaviour for fine grained soils, DDL theory.

M. C. Deo, PhD (IIT Bombay)

Professor and Head

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)

Y. M. Desai, PhD (Manitoba)

Professor

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

D. M. Dewaikar, PhD (IIT Bombay)

Professor

Geotechnical engineering: Offshore foundations, Ground improvement, Seepage.

S. L. Dhingra, PhD (IIT Kanpur)

Professor

Transportation systems engineering: Modeling, Simulation, Economics, Environmental impact assessment, GIS, Expert systems, Artificial intelligence, Genetic algorithms, Fuzzy set theory.

T. I. Eldho, PhD (IIT Bombay)

Associate Professor

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.

Alok Goyal, PhD (Berkeley)

Professor

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.

Siddhartha Ghosh, PhD (Michigan)

Assistant Professor

Structural engineering: Performance-Based Seismic Design, Reliability-Based Seismic Design, Plastic Design of Steel Structures, Life Cycle Cost Analysis of Buildings.

Subimal Ghosh, PhD (IISc, Bangalore)

Assistant Professor

Water resources engineering: Uncertainty Modeling, Water Resources Systems, Hydroclimatology.

Kapil Gupta, PhD (Sheffield)

Associate Professor

Water resources engineering: Urban water supply systems, Urban drainage, Urban water infrastructure management, Flood Protection structures, Computational fluid dynamics, Optimization, Environmental Impact assessment, Water quality analysis and modeling, Constructed Wetlands, Urban Disaster Management.

M. Inamdar, PhD (California Institute of Technology, USA)

Assistant Professor

Structural Engineering: Solid Mechanics, Cellular Adhesion and Motility, Mechanics of Soft Materials, Dissipation in Structural and Mechanical Systems.

R. S. Jangid, PhD (IIT Delhi)

Professor

Structural engineering: Structural mechanics, Structural dynamics and earthquake engineering, earthquake-resistant design, Base isolation for a seismic design of structures, Seismic isolation of bridges and liquid storage tanks, Non-classically damped system, Vibration control using tuned mass dampers.

A. Juneja, PhD (NUS Singapore)

Assistant Professor

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

V. Jothiprakash, PhD (IIT Madras)

Assistant Professor

Water resources engineering: Water Resources Systems Analysis Reservoir Operation, Policy Issues, Multi-objective Analysis Stochastic Hydrological Modeling Irrigation Water Management

Tarun Kant, PhD (IIT Bombay)

Professor

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.

Madhav N. Kulkarni, PhD (Ohio State)

Professor

Surveying and remote sensing: Global positioning system (GPS), Space geodesy, Geodetic Studies for geodynamics and earthquake monitoring, Mapping, GIS.

J. N. Mandal, PhD (IIT Kharagpur)

Professor

Geotechnical engineering: Geosynthetics for civil engineering construction.

T. V. Mathew, PhD (IIT Madras)

Associate Professor

Transportation systems engineering: Traffic flow modeling and simulation, Transportation network optimization, control and management

A. Mukherjee, PhD (IIT Kharagpur)

Professor (on lien)

Structural engineering: Composite materials, Environmental effects, Artificial neural networks, Artificial intelligence, Fiber reinforced composites.

Dasaka S. Murty, PhD (IISc, Bangalore)

Assistant Professor

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

B. S. Pani, PhD (Alberta)

Professor

Water resources engineering: diffusion of jets and plumes, multiple diffusers, offshore pipelines, scour problems, cooling water structures.

Pankaj K. Porwal, PhD (Cornell University)

Assistant Professor

Structural Engineering: Solid and structural mechanics, Impact strength of soft fibrous Body armors, Micromechanics and reliability of composites, Statistical strength of twisted fiber bundles, Nanoscale adhesion.

E. P. Rao, PhD (IIT Bombay)

Assistant Professor

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

K. V. Krishna Rao, PhD (IIT Madras)

Professor

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

K. Gopal Rao, PhD (IIT Bombay)

Professor

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.

A. K. Rastogi, PhD (Birmingham)

Professor

Water resources engineering: Groundwater flow modeling of aquifers, Ground water quality modeling.

Manne Janga Reddy, PhD (IISc, Bangalore)

Assistant Professor

Water resources engineering: Water resource systems, Evolutionary Computation for single & multi-objective optimization, Stochastic hydrology, Soft computing applications in hydrology, Climate change impacts on watersheds, water resources,

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

D. N. Singh, PhD (IIT Kanpur)

Professor

Geotechnical engineering: Environmental geotechnics, Radioactive waste disposal, Solid waste utilization, Geotechnical centrifuge modeling.

Ravi Sinha, PhD (Northwestern)

Professor

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

G. Venkatachalam, PhD (Leningrad)

Professor

Geotechnical engineering: Finite element analysis, Digital image processing, Digital terrain modeling, Centrifuge, Numerical and GIS modeling of landslides.

B.V.S. Viswanadham, PhD (Ruhr)

Associate Professor

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