

Annual Report 2009-2010

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:

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

This year, 43 MTech and 35 PhD students were admitted in the above specializations. In the first year, 86 students were on rolls in the B.Tech, 14 in the dual degree B.Tech/M.Tech programmes. The students that graduated from the Department are as follows:

Degree Awarded	
B.Tech.	: 51
M.Tech.	: 43
Ph.D.	: 16
Dual Degree	
B.Tech.	: 14
M.Tech.	: 14

Significant Awards / Distinctions

Choudhury D.

Humboldt Research Fellowship for Experienced Researchers – 2009, Alexander von Humboldt Foundation, Bonn, Germany, July 2009.

Maharashtra State National Award – 2009, Indian Society for Technical Education (ISTE), New Delhi, India, December 2009.

Indira Gandhi Priyadarshini Award – 2009, All India National Unity Conference (AINUC), New Delhi, India, November 2009.

The IIT Bombay Young Investigator Award – 2007, Indian Institute of Technology Bombay, Mumbai, India, September 2009.

Deo M.C.

Prof. H H Mathur Award for excellence in applied research, IIT Bombay.

Gupta Kapil

Shri P V Patki Memorial prize for best paper published in the IWWA journal 2009-10 at the 42nd IWWA convention in Jodhpur- Integrated

Approaches to Urban Drainage in Thane City, 2009, *J. of the Indian Waterworks Association*, 41, 1, 59-64 (with Nikam, Vinay and Lalla, K.D.).

Subimal Ghosh

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.

Nominated as Lead Author position in writing Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) by Ministry of Environment and Forests, Government of India

Young Scientist Award 2010 in “Engineering Sciences” from Indian Science Congress Association.

Tarun Kant

Received the Khosla National Award 2009 from Indian Institute of Technology Roorkee for his life time achievement in the field of engineering.

R&D Activities

Sponsored Research

Sponsored Research Projects : 58
New : 14
Ongoing : 44
Completed : 9
Faculty Involved : 22

Department received 14 new sponsored projects with a sanctioned outlay of Rs. 5.23 crores. A list of sample of new sponsored projects is as below:

Project Title	Sponsoring Agency	Status
Some Investigations on Cracking Characteristics of Fine-Grained Soils	DST	On going
Hydraulic Model Investigations for Design of Raft Foundations for Bridges	MoSRTTH	On going
Development of Resistance Factors for Shallow Foundations Using Laboratory Load Test Data	DST	On going
Behaviour of shallow footings subjected to underground and overground blast loading	DST	Ongoing
Derivation of operating rules for a multi-purpose reservoir using soft computing techniques	MoWR	On going
Integrated Flood Assessment Modeling for Urban Watershed Using Finite Element method, GIS and Remote Sensing	DST	On going
Developing integrated catchment management strategies for sustainable water use in response to climate change	Australian-Aid Project	On going
Development of Reliability Based Guidelines for the Design and Flaw Evaluation of Nuclear Piping System	BRNS, DAE	On going
Affordable Urban Modular Residential Buildings in Steel in India	ArcelorMittal R&D, Belgium	On going

Consultancy Work

240 consultancy projects worth about Rs. 7.52 crores 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

Third International Congress on Computational Mechanics & Simulation (ICCMS-09)", 2009. (Convener: Kant, T and T.I. Eldho)

Workshops

National Workshop on "Coastal Urban Flood Hazards & management", 19-20 February, 2010, IIT Bombay (Convener: T.I. Eldho, E.P. Rao and B.K. Mohan).

The NSF-IUSSTF Indo-US Workshop (Infra09) on "Innovative Materials and Structural Systems for Resilient and Sustainable Built Infrastructures," Dec 14-15, 2009, IIT Bombay, India. (Convener: Ghosh S, P. Banerji, S. Banerji)

Short-Term Courses

QIP Course "Finite Element Method and Applications in Engineering", held during Oct. 12-16, 2009 (Prof. Eldho T.I & Prof. Y.M. Desai)

QIP short term training program, “Soft Computing Techniques in Hydrology and Water Resources Engineering” during 2-6 November 2009, at IIT Bombay. (Convener: Jothi Prakash, V. and Janga Reddy, M)

QIP short-term course on “Recent Trends in Geotechnical Investigations for Urban and Infrastructure Development”, at IIT Bombay, from March 15-19, 2010. (Convener: Dasaka S. Murty)

CEP Courses

CEP course (In-house) on "Urban Drainage Management- State-of-the-Art", 5 June 2009 at Guwahati for Government of Assam. (Convener: Kapil. Gupta)

CEP Course (Open), on " Urban Drainage Management- State-of-the-Art " IIT Bombay, 30 July – 1 Aug 2009 (Convener: Kapil. Gupta)

CEP Course “Finite Element Method and Applications in Engineering”, held during Oct. 12-16, 2009 (Prof. Eldho T.I & Prof. Y.M. Desai)

CEP short term training program, “Soft Computing Techniques in Hydrology and Water Resources Engineering” during 2-6 November 2009, at IIT Bombay. (Convener: Janga Reddy, M. and Jothi Prakash, V.)

In-house Programme on **ADVANCED FOUNDATION ENGINEERING** for Tecnimont ICB, Mumbai, December 10-12, 2009 (Convener: D.N. Singh, and Dasaka.S. Murty)

CEP short-term course on “Recent Trends in Geotechnical Investigations for Urban and Infrastructure Development”, at IIT Bombay, from March 15-19, 2010. (Convener: Dasaka S. Murty)

Visitors to the Department and their presentations

Name and Affiliation	Date	Lecture Topic
Prof. A V Hegde, NIT Karnataka.	Friday, March 13, 2009	"Coastal Protection Works, Oil Spills and related Coastal Management Problems"
Justice A. M. Ahmadi, Former Chief Justice of India	Tuesday, March 24, 2009	"Relevance of Law for Engineers"
Dr. Bellie Sivakumar, University of California Davis	August, 25, 2009; Tuesday	"Hydrologic Modeling and Forecasting: Current Status and Future Directions"
Professor G. Krisnamoorthy, Department of Civil & Environmental Engineering, San Diego State University	October, 26, 2009; Monday	"Tsunami 2004: Causes, Effects and Remedial services"
Dr Graham Owens, FEng MSc PhD CEng FStructE FRSA, President of the Institution of Structural Engineers	November 9, 2009	A Rewarding Career in Structural Engineering
PB Vijay, former Director General, CPWD.	January, 11, 2010; Monday	"Gas Pressure Welding (Splicing) or Rebars"
Dr. Auroop R. Ganguly, Oak Ridge National Laboratory.	January, 11, 2010; Monday	"Climate Extremes: The Science, Impacts and Policy Relevance"

Lance Carter, PE – Technical Director, Strata Systems, Inc.	February, 16, 2010; Tuesday	"Geogrid and Geocell: Theory, applications and case studies"
Mr. P. K. Wattal, Head of Back-End Technology Division, BARC	27 February, Saturday, 2010	Sustainability of the Indian Nuclear Programme
Mr M.D.Kudale, Joint Director, CWPRS (Central Water resources and Power Research Station), Pune.	27 February, Saturday, 2010	Coastal Erosion and Protection
Mr. Mohan V. Jatkar, Chief Technical & Safety Officer & Member, Board of Management in Gammon India Ltd.	28 February, Sunday, 2010	Challenges faced by the Bridge Construction Industry
Mr Anil Banchhor, ACC Cement	28 February, Sunday, 2010	RMX- Distribution challenges
Jayant D Sathe, Registered Professional Engineer (PE) in the States of Illinois, Ohio and New York. and Founding President of the South Georgia Construction and Maintenance Council, Albany, Georgia.	2010 March 29 Monday	Combination of Management and Leadership in Project Management

Participation in Conferences/Symposia/Workshops/Seminars

Bajoria, K. M.

Participated and chaired session on *Advanced strategies and Rehabilitation*, International Conference on Construction Chemicals-Imperatives for enhancing consumption of construction chemicals in India, Feb 11-12, 2010, Nehru Centre, Mumbai, India.

Chandiramani, N. K.

Participated and chaired a session in 3rd International Congress on Computational Mechanics and Simulation (ICCMS-09), 1-5 December, 2009, IIT Bombay.

Choudhury, D.

Participated and made oral presentation of a technical paper in *GeoFlorida-2010, Annual Congress of the Geo-Institute of ASCE*, February 20 - 24, 2010, West Palm Beach, Florida, USA organized by GI-ASCE.

Participated in the 3rd *International Congress on Computational Mechanics and Simulation (ICCMS09)* during December 1 – 5, 2009, jointly organized by Indian Association for Computational Mechanics (IndACM) and IIT Bombay, India. Also acted as a Chairman of a session during ICCMS09.

Dasaka, S.Murty

Participated in the *Indian Geotechnical Conference (IGC-2009)*, Guntur, Andhra Pradesh, February 18-20, 2010

Deo. M.C

Attended international conference: APAC2009 at Singapore, Hydro-2009 at Pune, National Conference on Coastal Processes, Resources and Management, Centre for Earth Sciences, Thiruvananthapuram, Feb. 5-7, 2010, Hydro-2009, Dec. 17-18, 2009, CWPRS, Pune,

Eldho, T.I.

Participated in the *International Workshop on “Developing integrated management strategies for sustainable water use in response to climate change”*, IIT Bombay 17-18 June 2009 Mumbai, INDIA.

Participated in the *International Symposium by IAHS & IAH*, Hyderabad, September 2009.

Participated in the *International Workshop Climate Change and Water Resources Management*, Melbourne, Australia, 1-2 September 2009.

Participated in the *International Workshop Climate Change and Water Resources Management, Integrated Catchment Management Strategies for Sustainable Water Use in Response to Climate Change*, Nov. 201-21, Puri, Orissa.

Participated in the *ICCMS09*, IIT Bombay, 1-5 December 2009.

Participated in the *International Workshop on GIS Technology & Applications*, IIT Bombay, 16-18 December 2009.

Participated in the *National Conference on Coastal Processes and Management*, Centre for Earth Science Studies, Trivandrum, Kerala, 5-7 February 2010.

Participated in the *National Workshop on Hydroinformatics*, MS University Baroda, 14th February, 2010.

Gopal R Patil

Attended conference on *Building Infrastructure: Challenges and opportunities*, March 23, 2010, Vigyan Bhavan New Delhi, organized by Planning commission, Government of India

Gupta, Kapil

Participated and presented a paper in EWRI- ASCE International Conference on Water Resources and Environment, Chennai, 5-7 January 2010

Participated and presented a paper in International Conference on Urban Flood Management, UNESCO, Paris, France, 25-27 November 2009

Participated and presented a paper in 8th International Conference on Urban Drainage Modelling, Tokyo, Japan, 7-11 September, 2009

Water Sensitive Urban Design (WSUD) 2009 Conference, **Perth**, Australia, 5-8 May 2009

Ghosh S

Participated and chaired a session in International Conference on Mechanics, Materials and Management, Trivandrum, India, 2010.

Participated in the inaugural thematic workshop of the Advanced Facility for Reliability and Risk Engineering in IIT Kharagpur, India, 2010.

Janga Reddy, M.

Coordinated a session, presented a paper and served as associated editor for Proceedings of *4th Indian International Conference on Artificial Intelligence (IICAI-2009)*, held at Tumkur, India, December 16-18, 2009.

Co-chaired a session and presented a paper in National Conference on *Sustainable Water Resources Management and Impact of Climate Change (SWRM-2010)*, held at BITS-Pilani campus Hyderabad, March 5-6, 2010

Jothiprakash, V.

Participated in the *Two days workshop on Application of Advanced Soft Computing in Multidimensional in Geospatial data analysis*, Indian Institute of Technology Kanpur, 15-16 Oct. 2009

Participated in the *Indian International Conference on Artificial Intelligence*, Siddaganga Institute of Technology, Tumkur, Karnataka, 16-18th Dec. 2009.

Participated in the *VII R&D Indian National Committee on Hydrology Workshop*, Indian Institute of Technology Madras, Chennai, 10-12th Feb. 2010.

Participated in the *National workshop on Coastal Urban Flood Hazards and Management*, Indian Institute of Technology Bombay, Mumbai, 19-20th Feb. 2010.

Participated in the *National Conference on Sustainable Water Resources Management and Impact of Climate Change*, BITS-Pilani Hyderabad campus, 5-6th Mar. 2010.

K.V. Krishna Rao

Participated in A two-day workshop on *Sustainable Urban Transportation* was jointly organised by IIT Bombay and University of South Australia during 27-28 April 2009 at IIT Bombay.

Participated as an expert panelist at the *City Planning and Governance Summit: Modeling the New Urban India* on January 20, 2010 at Hotel Taj Mahal Palace and Towers, Mumbai conducted by Times Grey Cell, Bennett, Coleman & Co.Ltd.

Rastogi A.K

Participated and made oral presentation of a technical paper “*Role of Inverse Modeling in Groundwater System Simulation*” 8th IAHS Scientific Assembly and 37th IAH Congress – Organised by NGRI, Sept 6-12, Hyderabad, 2009.

Participated and made oral presentation of a technical paper “*Longitudinal and Transverse Dispersivity Assessment by a Coupled Inverse Model of Groundwater Flow and Mass Transport: A Case Study*” 3rd World Aqua Congress, Organised by Aqua Foundation, World Habitat Centre, New Delhi, Dec. 2 - 4, 2009.

Tarun Kant

Chaired the organizing committee for the Third International Congress on Computational Mechanics and Simulation (ICCMS-09) which was held at IIT-Bombay on 1-5 December 2009.

Vedagiri P

Attended and successfully completed certification course on “*Road Safety Audit*” organized by International Roads Federation (IRF) and Australian Road Research Board (ARRB).

Participated in the conference on “*Building Infrastructure: Challenges and Opportunities*” organized by Infrastructure Planning Commission, Government of India.

Invited Lectures

Banerjee Sauvik

Taught two lecture sessions of the CEP/QIP short term course on “*Finite Element Method and Applications in Civil Engineering*” coordinated by Prof. Y.M.Desai and T.I.Eldho in the department between 12-16 October, 2009

Choudhury, D.

Earthquake Resistant Design of Geotechnical Structures: Research at IIT Bombay, on 5th March, 2010, at Department of Civil Engineering, Technical University (TU) Berlin, 13355 Berlin, Germany.

State-of-the-art Research on Behaviour of MSW Landfill under Static and Seismic Loading Conditions, on 4th February, 2010 at Institute for Computer Science, University of Bayreuth, Germany.

Theory of Vibrations and Seismic Design Principles for Geotechnical Structures as per Design Codes, organized by MIT Aurangabad, India and sponsored by National Disaster Management Division of Ministry of Home Affairs, Govt. of India during National Programme for Capacity Building of Architects in Earthquake Risk Management (NPCBAERM) during November 9 – 14, 2009.

Integrity of Sub-Structural Systems during Earthquake: Indian and International Perspectives, organized by Indian National Academy of Engineering (INAE), New Delhi, India during Fourth National Symposium on Frontiers of Engineering (NatFOE – 4) on 17th September, 2009, at Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, India

Geotechnical Earthquake Engineering: Recent Research at IIT Bombay, on 3rd July, 2009, at Institute of Lowland Technology (ILT), Saga University, Japan.

Behaviour and Design of Reinforced Soil-Wall under Seismic Loading: Recent Research at IIT Bombay, on 2nd July, 2009, at Dept. of Civil Engineering, Kyushu University, Japan.

Geotechnical Earthquake Engineering: Recent Research Findings at IIT Bombay, on 1st July, 2009, at Dept. of Civil and Environmental Engineering, Yamaguchi University, Japan.

Earthquake Resistant Design of Geotechnical Structures: Research at IIT Bombay, on 29th June, 2009, at Disaster Prevention Research Institute (DPRI), Kyoto University, Japan.

Recent Research on Geotechnical Earthquake Engineering at IIT Bombay, on 26th June, 2009, at Institute of Technology, Shimizu Corporation, Japan.

Geotechnical Earthquake Engineering: Recent Research Findings at IIT Bombay, on 25th June, 2009, at Dept. of Civil Engineering, Tokyo Institute of Technology (TIT), Japan.

Geotechnical Earthquake Engineering: Recent Research and Developments at IIT Bombay, on 22nd May, 2009, at Dept. of Ocean Civil Engineering, Kagoshima University (KU), Japan.

Deo, M.C.

Artificial neural networks in coastal and ocean engineering, National Conference on Coastal Processes, Resources and Management, Centre for Earth Sciences, Thiruvananthapuram, Feb. 5-7, 2010, 115.

Eldho, T.I.

Integrated Water Resources Management Using FEM, GIS & Remote Sensing Techniques, National Workshop on Hydroinformatics, MS University Baroda, 14th February, 2010.

Integrated Water Resources Management Using Numerical Models, GIS & Remote Sensing Techniques, Inter National Workshop on GIS Technology & Applications, IIT Bombay, 16-18 December 2009.

Integrated Hydrological Modeling for Mahanadi River Basin Using Computer Models, GIS & Remote Sensing, International Workshop Climate Change and Water Resources Management, Integrated Catchment Management Strategies for Sustainable Water Use in Response to Climate Change, Nov. 201-21, 2009 Puri, Orissa.

Integrated catchment management in India, International Workshop Climate Change and Water Resources Management, Melbourne, Australia, 1-2 September 2009.

Gopal Rao K

Artificial Neural Networks in Remotely Sensed Data Analysis, QIP STTP, "Soft Computing Techniques in Hydrology and Water Resources Engg", Nov. 2-6, 2009, IIT Bombay.

Special guest lecture at College of Engineering, Thiruvananthapuram, Goa College of Engineering Goa, JJM College of Engineering Jaisingpur Maharashtra, Maharashtra Institute of Technology Pune.

Gupta Kapil

The Need for Sustainable Urban Drainage Systems (SuDS)", National Seminar on Sustainable Environment, VJTI, Mumbai, 20 December 2009.

Ghosh. S

"History and Future Projections of Reliability Studies and Applications in India" at AFFRE, IIT Kharagpur, India, 2010.

On various aspects of design using IS:800-2007 at various colleges and institutes in Mumbai and Goa, invited by INSDAG, India, 2009.

"Structural Engineering Research Opportunities at IIT Bombay", at Bengal Engineering and Science University, Howrah, India, 2010

K.V.Krishna Rao

Travel Demand Modelling and Analysis at the AICTE Short Term Training Programme on Recent Trends in Urban Transportation Planning (RTUTP-09) conducted by Civil Engineering Department, SVNIT, Surat during 5-10 October 2009

Basic Aspects of Discrete Choice Modeling at the AICTE Short Term Training Programme on Discrete Choice Modelling (DCM09) conducted by Civil Engineering Department, SVNIT, Surat during 21-25 December 2009.

Rao E.P

Delivered two lectures to the participants of QIP and CEP short term course on 'Soft computing Techniques in Hydrology and Water Resources Engineering', Civil Engineering Department, IIT Bombay, Mumbai, 2-6 November, 2009.

Singh, D.N.

Characterization of Soft Clays, for Infrastructure Projects, using Bender Elements, SVNIT, Surat, January 2010.

Modeling of Geoenvironmental Engineering Problems, IIT Guwahati, November 2009.

Modeling of Geoenvironmental Engineering Issues, KIIT, Bhubaneswar, October 2009.

Modeling of Geoenvironmental Engineering Issues, SVNIT, Surat, August 2009.

Modeling of Geoenvironmental Engineering Problems, IIT Madras, August 2009.

Subimal Ghosh

Climate Change and Downscaling in International Symposium on "Integrated Catchment Management for Sustainable Water use in response to Climate Change" held in Melbourne, Australia during September 1-2, 2009.

Assessing Hydrological Impacts of Climate Change in a workshop on "Climate Change and Water Resources in South Asia" organized by UNESCO in Delhi during 8 to 10 August 2009.

Tarun Kant

Invited Talk, in 10th US National Congress on Computational Mechanics (USNCCM-10), Columbus, Ohio, USA, 16-19 July 2009

Delivered a keynote Lecture in Proc. International Conference on Advances in Mechanical and Building Sciences in the 3rd millennium (ICAMB-2009), VIT University, Vellore, 14-16 December 2009.

Vedagiri. P

BRTS for Mumbai-Why we must and How We can at Observer Research Foundation Mumbai, March 2010.

Planning Bus Priority System under Heterogeneous Traffic Conditions, at Birla Institute of Technology & Science (BITS) Pilani, February 2010.

Viswanadham. B.V.S.

Field testing methods for assessing efficacy of ground improvement techniques was delivered on March 16, 2010 during CEP-QIP training programme on Site investigations and relevance to infrastructure organized at IIT Bombay

Ground improvement techniques for infrastructure projects was delivered on March 16, 2010 during CEP-QIP training programme on Site investigations and relevance to infrastructure organized at IIT Bombay

Model studies on the performance of reinforced highway slopes was delivered at CRRRI National Get Together (NGT 2010) organized by Central Road Research Institute, New Delhi on March 6, 2010.

Potential of geosynthetics for landfill containment applications was delivered during National workshop on application of geosynthetics in civil and mining engineering, January 23-25 2010 organised at Goa

Stability of geosynthetic reinforced soil slopes was delivered during National workshop on application of geosynthetics in civil and mining engineering, January 23-25, 2010 organised at Goa

Centrifuge modelling of geosynthetic reinforced soil structures was delivered on August 11, 2009 during CEP-QIP training programme on Geosynthetic reinforced soil structures organized by the department of Civil Engineering, IIT Madras.

Studies on Waste Containment Systems and Relevance to India was delivered at the department of Civil Engineering, SV University, Tirupathi on April 5, 2009.

Honorary Work

Banerjee Sauvik.

Organized (as Co-PI) IUSSTF-NSF Indo-US Workshop on “Innovative Materials and Structural Systems for Resilient and Sustainable Built Infrastructure” jointly with Michigan State University at IIT Bombay on 14-15 December, 2009.

Member of the Local Organizing Committee, 3rd International Congress on Computational Mechanics and Simulation (ICCMS09) held at IIT-Bombay on 1-5 December 2009

Reviewed papers for Journal of Intelligent Materials Systems and Structures and Journal of Structural Health Monitoring.

Chandiramani, N. K.

Reviewer (i) Structural and Multidisciplinary Optimization, (ii) Sadhana, (iii) ASME Journal of Manufacturing Science and Engineering, (iv) ASME Journal of Dynamic Systems, Measurement and Control, (v) Journal of the Institution of Engineers (India).

PhD thesis examiner (Department of Mechanical Engineering, IISc Bangalore)

GATE paper setter (Aerospace Engg – Structures part)

Reviewed DST Projects.

Choudhury, D.

Editorial Board Member and Coordinator for Asia 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.

Guest Editor for a Special Issue on "Earthquake Geotechnical Engineering – Recent Developments" published in Volume 2, Issue 3

(pp. 515 – 572) of ‘American Journal of Engineering and Applied Sciences (AJEAS)’ (ISSN: 1941-7020), Science Publications, USA.

Managing Editor for June 2009 issue (Volume 3, Issue 2) 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.

Reviewed papers for several Journals like (i) Canadian Geotechnical Journal, (ii) Soil Dynamics and Earthquake Engineering, Elsevier (iii) Journal of Geotechnical and Geoenvironmental Engineering, ASCE, (iv) International Journal of Geomechanics, ASCE, (v) Engineering Geology, Elsevier (vi) Ocean Engineering, Elsevier (vii) Geotechnical Engineering, Proc. of Institute of Civil Engineers (ICE), (viii) Geosynthetics International, ICE (ix) Ground Improvement, ICE (x) Geotechnical and Geological Engineering, Springer (xi) Engineering Structures, Elsevier (xii) International Journal for Numerical and Analytical Methods in Geomechanics, John Wiley (xiii) Landslides, Springer (xiv) Bulletin of Earthquake Engineering, Springer (xv) Scientia Iranica, Transaction A (xvi) Journal of Institute of Engineers, India and (xvii) Indian Geotechnical Journal, India.

Organizing Committee Member, 3rd International Congress on Computational Mechanics and Simulation (ICCMS09) during December 1 – 5, 2009, jointly organized by Indian Association for Computational Mechanics (IndACM) and IIT Bombay, India. Also acted as a Chairman of a session during ICCMS09.

Reviewer for *GeoFlorida 2010: Advances in Analysis, Modeling & Design*, Annual Conference of Geo-Institute (GI), ASCE, USA.

Advisory and Technical Committee Member, International Conference on Advances in Concrete, Structural and Geotechnical Engineering

(ACSGE-2009) during October 25 – 27, 2009, organized by Birla Institute of Technology & Science (BITS), Pilani, Rajasthan, India.

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.

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

Reviewer of PhD thesis of Department of Civil Engineering, Indian Institute of Science, Bangalore, India.

Dasaka, S.Murty

Reviewer: Georisk, An International Journal International Journal of Earth Sciences & Engineering International Conference on Physical Modelling in Geotechnics

Deo, M.C.

Editor-in-Chief of 'International Journal of Ocean and Climate Systems' published by Multi-Science Publishing, Essex, U K.

Associate Editor of ASCE Journal of Computing in Civil Engg.

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/>

Editor: Special issues of the ISH Journal of Hydraulic Engineering - 2009

Member, Board of Directors, Konkan Railway Corporation

Member, Advisory Board, National Water Academy

Member, expert committee, INCOIS, DOD, GOI, Hyderabad

Member, Faculty Selection Committees of IIT Delhi, KGP, Madras, Bhubaneswar

Member, Scientists Selection Committees of NIO, Goa

Member, Advisory Boards of UPSC

Member, Program Management Board, NIOT, Chennai

Selection Committee for best paper of ISH

Member, Executive Council, Indian Society for Hydraulics ,

Session Chair of a few conferences held in India and abroad

Examiner, Ph D thesis of IITM, NIT S,

Reviewed around 25 papers for various national and international journals and project proposals of some national agencies.

Eldho, T.I.

Vice-Chairman, GATE 2009, IIT Bombay.

Associate Editor of International Journal of Ecology and Development.

Editor-in-Chief of the Journal “International Journal of Water Resources and Environmental Management” to be published by Serial Publications from 2009.

Executive Council Member, Indian Society of Hydraulics, Pune.

Referee Ph.D. Thesis, IIT Roorkee; NIT Surathkal, IIT Madras, JNTU, Hyderabad.

Technical Review Committee Member of ICAR, Rubber Dam project implemented by Indian Rubber Manufacturing Research Association, Thane.

Technical Committee Member of 17th APD-IAHR Congress held at New Zealand in 2010.

Reviewed Project proposal for DST, New Delhi, 2009.

Chaired a Session in “3rd International Congress on Computational Mechanics & Simulation (ICCMS-09)”, 2009.

Chaired a Session in National Conference on Coastal Processes and Management, Centre for Earth Science Studies, Trivandrum, Kerala, 5-7 February 2010, pp. 185-195.

Reviewer: Journal of Advances in Water Resources, 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, IAHR – Journal of Hydraulic Research, Int. J. Hydrological Processes, International Journal Environment and Waste Management, ISH Journal of Hydraulics Engineering, Journal of Institution of Engineers (India) – Civil Engineering Section, ASCE Journal of Hydrologic Engineering,

Advances in Civil Engineering, Journal of Flood Engineering, International Journal of Earth Sciences and Engineering, International Journal of Numerical Methods in Fluids, Journal of Earth System Science, Journal of Geomatics, Sadhana - Academy Proceedings in Engineering Science

Gopal Rao K

AICTE-NBA Accreditation expert team member.

Expert Member PhD evaluation, Karunya University, Coimbatore

Gupta Kapil

Member -UNESCO Working Group: Sustainable Urban Water Strategies, VII IHP, 2008-2013

Member- Editorial Board: Urban Water Journal

Member of two International working groups of the IAHR/IWA joint committee on Urban Drainage: *Sewer Systems and Processes Working Group (SS&PWG)*, *Urban Rainfall Group (URG)*

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.

Member, DST technical expert sub-committee on Interventional Strategy Building for Water Programme, Government of India, New Delhi

Ghosh S

Reviewer of research project proposals submitted to DST

Reviewer of research completion reports submitted to BRNS, DAE

Reviewer of course-materials developed under National Mission Programme on Education(NMPE)-ICT

Examiner of PhD thesis from IIT Roorkee

Session Chair in the International Conference on Mechanics, Materials and Management, Trivandrum, India, 2010

Expert member of Department Undergraduate Programme Committee (DUPC) of Dept of Civil Engineering, College

Reviewer of articles submitted to: Journal of Structural Engineering, ASCE, Engineering Structures, International Journal of Structural Stability and Dynamics, and Sadhana

Janga Reddy, M.

Reviewed technical papers for Journals: IEEE Transactions on Evolutionary Computation, Journal of Hydrologic Engineering (ASCE), Computational and Applied Mathematics Journal, Water Resources Management Journal, Irrigation & Drainage Journal, Hydrological Sciences journal, Engineering Optimization, ISH Journal of Hydraulic Engineering

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, Water Resources Management (Springer Publications), Journal of Institution of Engineers (India) Civil Engineering Division, Journal of Indian Society of Hydraulics

Kant, T.

Member: National committee of IUTAM, Engineering science committee of IASc, BW&C of NITIE, AICTE, IITs/IISc selection committees, High-rise committee of Government of Maharashtra, Editorial boards of Computer Modeling in Engineering Science (CMES), Structural Engineering and Mechanics (SEM), International Journal for Computer Methods in Engineering Science and Mechanics (IJCMESM) and Advances in Civil Engineering.

Chairman: AICTE-NBA accreditation committees.

Reviewer: IJCMESM, CMES, Journal of Sound and Vibration, Computational Mechanics, Computers and Structures, PhD theses of IISc, IITKgp, IITM, VNIT-Nagpur, Patna University and Pune University.

K.V.Krishna Rao

Member of the Scientific Committee of World Conference on Transportation Research Society (WCTRS)

Member of the Standing Technical Advisory Committee on Road Works, Municipal Corporation of Greater Mumbai

Mandal J.N

Member of the International Scientific Advisory Board (ISAB) of the world City water Forum 2009

Rao E.P

Reviewer of Journal of Earth System Science, Indian Academy of Sciences, *Springer*. Water Resources Management, *Springer*. Indian Society for Hydraulics (ISH) Journal of Hydraulic Engineering.

Rastogi. A. K.

Invited to evaluate Ph.D. Thesis, Dept. of Civil Engg, MSU Baroda, - April 2009

Invited to conduct Ph.D. viva, Dept of Civil Engineering, IISc Bangalore Octr, 14, 2009

Member Expert Panel – Indian National Committee on Groundwater (Govt. of India)

Co- Convener: Groundwater Resource Management in Hard Rock Areas - International Association of Hydrological Sciences (IAHS) and International Association of Hydrogeologist (IAH) Joint Convention, Hyderabad, Sept. 6-12, 2009

Research Papers were reviewed for the following journals: Journal of Hydrology, KSCE Jr. of Civil Engineering, International Journal of Water, Journal of Environmental Monitoring and Assessment, Advances in Civil Engineering

Review of Research Project Proposal from DST.

Singh, D.N.

Editorial Board Member—International Journal of Geomechanics, ASCE

Editorial Board Member—International Journal of Geotechnical Engineering

Editorial Board Member--Geotechnical Testing Journal, ASTM International

Editorial Board Member-- Geomechanics and Geoengineering (Taylor & Francis)

Editorial Board Member-- Korean Society of Civil Engineering (KSCE) Journal of Civil Engineering

Editorial Board Member-- Geomechanics and Engineering (GAE), An International Journal of Computational and theoretical Geomechanics, Foundation Engineering, Engineering Applications, Site Characterization.

Guest Editor: Special Issue of the KSCE, Journal of Civil Engineering, Korean Society of Civil Engineers, which has been named as Advances in Geomechanics. Volume 13, Number 4, July 2009

Guest Editor: Special Issue: Geomechanics in the Emerging Social and Technological Age: International Journal of Geotechnical

Engineering, Guest Editors: Nagaratnam Sivakugan* and Devendra Narain Singh, Volume 3, Issue 4, October 2009. Civil & Environmental Engineering School of Engineering and Physical Sciences, James Cook University, Australia

Subimal Ghosh

Reviewer of Journals (Journal of Hydrology, Journal of Hydrologic Engineering, ASCE, Journal of Computing in Civil Engineering, ASCE, Journal of water Resources Planning and Management, ASCE, Journal of Hydraulic Engineering [Indian Society for Hydraulics], Geography and Regional Planning Journal, Journal of Hydroinformatics, Journal of Ocean and Climate Systems, Journal of Environmental Management etc.).

Tom. V Mathew

Member, Technical Scrutiny Committee for the Development of Multi-level Car Parking in Greater Mumbai, Municipal Corporation of Greater Mumbai, 2009.

Vedagiri. P

Reviewer- Cities : the International Journal of Urban Policy and Planning

Elected as a Life Member of the Indian Roads Congress, New Delhi.

Elected as Associate Member of the Institution of Engineers (India).

Publications

Books

Eldho T.I. & Y.M. Desai, (Editors) Lecture Notes for QIP/ CEP Short-term course “Finite Element Methods and Applications in Civil Engineering”, 2009.

Eldho T.I. Youtube webcasted the Video Course on “Fluid Mechanics”, and rated as popular engineering course video

Eldho T.I., E.P. Rao and B.K. Mohan.(Editors) Proceedings of DST Sponsored National Workshop on “Coastal Urban Flood Hazards and Management”, February 2009.

Huggi V P and **Rastogi A K** “**Estimation of System Parameters in Groundwater Systems**”, VDM Verlag, Saarbrücken, (W. Germany) 2009, ISBN 978-3-639-20736-1

Janga Reddy M (2009). *Swarm Intelligence and Evolutionary Computing for Single and Multi-objective Optimization in Water Resource Systems*, LAP Lambert Academic Publishing, Germany, ISBN 978-3-8383-0220-1, 2009, pp.280.

Tarun Kant, and **Eldho T.I.**, and S. Banerji. (Editor) Proceedings of “3rd International Congress on Computational Mechanics & Simulation (ICCMS-09)”, 2009,

Ukarande S K and **Rastogi A K** “Numerical Modeling of Coastal Aquifers”, VDM Verlag, Saarbrücken, (W. Germany) 2009, ISBN 978-3-639-17552-3

Chapters in Books

Deepankar Choudhury and Purnanand Savoikar (2010); "Seismic translational failure analysis of MSW landfills using pseudo-static approach", In GeoFlorida 2010: Advances in Analysis, Modeling & Design, *Geotechnical Special Publication No. 199*, ASCE, Edited by Dante Fratta, Anand J. Puppala and Balasingam Muhunthan (ISBN 978-0-7844-1095-0) USA, pp. 2830-2839, in CD-ROM.

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Alka S. Kote and **V. Jothiprakash** “Stochastic and Artificial Neural Network Models for Reservoir Inflow Prediction” *Journal of Institution of Engineers (India)*. Vol. 90, CV, Nov, 2009, pp 25-33.

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