SRINIVASAN CHANDRASEKARAN

Professor-HAG (Structural Engineering)

Dept of Ocean Engineering, IIT Madras

Chennai 600 036

Email: drsekaran@iitm.ac.in

Homepage: www.drsekaran.com

Tel: +91-044-22574821

Date of birth: 27th October 1964

Publications and research statistics:

Text books authored: NINETEEN

Text books edited: FOUR

Research papers published in Refereed journals: EIGHTY ONE

Research papers published in Refereed conferences: SEVENTY FIVE

PhD thesis guided: TWENTY ONE

M.S (by Research) guided: TWELVE

Education:

Post Doctorate: 2007 to 2009/ University of Naples Federico II, Naples, Italy

Ph.D: 1999/ Indian Institute of Technology, Delhi- Specialization in Structural Engineering

M.Tech: 1995/ Indian Institute of Technology, Delhi- Specialization in Structural Engineering

B.E Gold Medalist with distinction: 1991/ Bharathiyar University, Coimbatore, India- Specialization in Civil Engineering – University Rank Holder

Areas of Specialization

Offshore compliant structures; Structural Dynamics and Earthquake Engineering; Seismic evaluation and retrofitting of buildings and offshore structures; Risk and Reliability of offshore structures; Structural health monitoring using wireless sensor networking; Design and

development of wave energy devices; Health, Safety and environmental management for offshore and petroleum engineering

Academic positions

Professor *(HAG)* Dept. of Ocean Engg., Indian Institute of Technology Madras, India since 18-07-2014

Associate Professor, Dept. of Ocean Engg, Indian Institute of Technology Madras, INDIA (from 24-08-2009 to 17-7-2014)

Visiting Fellow MiUR *(Ministry of Italian University and Research),* Dept of Structural Engg, Univ. of Naples Federico II, Italy (05/2007 to 05/2009)- Teaching, research and sponsored research consultancies (design and development of passive response control of structures using MR dampers and viscous dampers). Clients: Fipp- Italy, Maurer and Shone, Germany, Reluis Line 7- International project with European Union

Reader (Structural Engg), Dept of Civil Engg, Institute of Technology, BHU, INDIA: since 10-12-2007 to 23-08-2009)- Teaching, research, industrial consultancies, University Engineer (additional charge), University Works Dept, Banaras Hindu University. Clients: Public Works Dept, UP state PWD, UP state bridge Constn Corpn etc

Lecturer, Dept of Civil Engg, Institute of Technology, Banaras Hindu University, INDIA: 08/2002 to 10/2007

Assistant Professor, Rao Tula Ram College of Technical Education, New Delhi: 06/1991 to 01/2000

Credits

MiUR Fellow, Ministry of Italian University Research, Govt. of Italy

Member, American Society of Civil Engineers (MASCE)

Member, Int. Society of Offshore and Polar Engineers (MISOPE)

Member, Society of Petroleum Engineering (SPA)

Member, American Society of Mechanical Engineers (MASME)

Life member, Society of Failure Analysis (SFA)

University Rank Holder during Bachelor Program in Civil Engg

Research experience

Dr. Chandrasekaran has maintained balance between academic and practical experience in the past 29 years. He has interests in structural dynamics and earthquake engineering, nonlinear dynamics of offshore structures under environmental loads, structural health monitoring and control. In the past 25 years, he has obtained experience in nonlinear dynamic analysis of buildings and offshore structures and investigated them for their critical performance behaviour under various environmental loadings. He has been an active member in different administrative and technical committees at IIT Madras and Banaras Hindu University, Varanasi. Dr.

Chandrasekaran has a combined experience of teaching, research and Industrial consultancy in designing and supervising heavy industrial structures for paper industry and cement industry in Southern India. He has successfully completed many researches based industrial consultancy projects resulting in design and development of new design principles/mechanisms as applied to buildings and offshore structures; few of them include i) design and development of damping devices for response control of structures; design and development of wave energy devices; and risk assessment of offshore projects on oil and gas industry.

Post-Doctoral Research

Dr. Chandrasekaran is the recipient of Post-Doctoral Fellow offered by Ministry of University Research (MIUR), Italy for a period of two years with effect from 15th May 2007. He conducted research jointly with Prof. Giorgio Serino, Dept of Structural Engg, University of Naples Federico II, Naples, Italy. The broad area of his research work focussed on the *Development of Nonlinear calculation models for buildings in seismic areas and experimental validation,* including developing technologies for seismic isolation and control of structures. The main objective of the fellowship work is to improve the knowledge of some specific aspects of design and functioning of passive and semi-active systems for response control of structures subjected to seismic loads. The activities focus on theoretical and experimental studies including parametric investigations and case studies to update design and verification methods of structural system and devices for control algorithms of structural response. Detailed analytical studies are conducted on performance assessment of multi-storey RC framed buildings under seismic loading using modal pushover analyses procedure. Comprehensive design guidelines are developed for estimating axial force-bending moment yield interaction, moment rotation and moment characteristics for RC frame elements using Euro Code. Advanced studies are also conducted on response behaviour of offshore tension leg platforms under different environmental loadings.

Project's coordination

Member, Research Team (ReLUIS)- the project financed by the Italian Department of Civil Protection (DPC) within the Italian Network of Earthquake Engineering Laboratories.

Deputy Coordinator- SAP Project financed by University Grants Commission, India for Analysis, design, rehabilitation and retrofitting of Masonry and RC framed buildings under seismic loads.

Coordinator of research-based project funded by Naval Research Board, Govt. of India

Industrial Consultancy and sponsored research

Successfully completed consultancy projects for Changwon University, South Korea, University of Naples Federico II Italy, AERB, L&T, DGNP Mumbai, DGNP Vizag, BGR Energy, Sea6 Energy

Consultancy for Ship Building Centre, Vizag under Director General Naval Projects, Govt. of India

Seismic qualification of bus duct for atomic power station, Kalpakkam, Govt. of India

International coordinator for foreign students from Korea and Italy to carry out research-based projects at Dept of Ocean Engg, IIT Madras,

International coordination

Coordinator for international cooperation in academic and research activities between IIT Madras and University of Naples Federico II, Italy

Coordinator for international cooperation in academic and research activities between IIT Madras and Changwon National University, South Korea