

SRINIVASAN CHANDRASEKARAN

Current position:

Professor-HAG (Structural Engineering)
Dept of Ocean Engineering, IIT Madras
Chennai INDIA 600 036
Email: drsekar@iitm.ac.in; drsekar@gmail.com
Homepage: www.drsekar.com
Tel: +91-044-22574821
Google Scholar:
<https://scholar.google.co.in/citations?user=LsBjvFEAAAAJ&hl=en>
Web of Science Researcher ID: ABC-9313-2020



Publications and research statistics:

Textbooks authored: NINETEEN
Books edited: FOUR
Research papers published in Refereed journals: EIGHTY-FOUR
Research papers published in Refereed conferences: SEVENTY-SEVEN
PhD thesis guided: SEVENTEEN
M.S (by Research) guided: TWELVE
Ph.D guidance (ongoing): SIX

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

Current areas of research

Offshore structures- Dynamic analysis, design and development for ultra-deep waters; Risk and Reliability of offshore structures; Structural health monitoring using wireless sensor networking; Design and development of wave energy devices; Fire resistant design of structures; Functionally-graded materials and their advanced applications- Advanced steel design; Computer aided analysis of structures

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 Construction Corporation

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 maintained balance between academic and practical experience in the past 30 years of the professional career. Being a very popular academician, active structural consultant, vibrant speaker and able administrator, he has a combined experience of teaching, research and Industrial consultancy in designing and supervising heavy industrial structures for paper industry and cement industries. He has successfully completed many researches-based industrial consultancy projects resulting in design and development of new design principles 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. Close to two-dozen text books authored by him and many web-based courses on the NPTEL and MOOC platforms are testimonies of his academic career. He is enthusiastic in capacity building of faculty and consulting engineers, which are show-cased by a large number of PhD guidance and short courses conducted by him. He is active member of many professional societies of India and abroad.

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.

Industrial Consultancy and sponsored research

- Consultancy projects for Changwon University, South Korea, University of Naples Federico II Italy, Atomic Energy Regulatory Board (Bhavini Project), Larsen & Toubro Ltd, Director General Naval Projects, Mumbai and Vizag, BGR Energy systems, Ship Building Centre, Vizag, and Naval Research Board (GoI),

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

Web-based courses:

Following courses are developed, and conducted for National Program on Technology Enhanced Learning (NPTEL), Min of Education, Govt. of India

1. Srinivasan Chandrasekaran. 2022. Advanced steel design, Video course on MOOC at NPTEL portal, https://onlinecourses.nptel.ac.in/noc22_oe02/course
2. Srinivasan Chandrasekaran. 2022. Dynamics of Ocean structures, Re-run video course in MOOC, https://onlinecourses.nptel.ac.in/noc22_oe03/course
3. Srinivasan Chandrasekaran. 2022. Computer methods of structural analysis of offshore structures, Re-run video course in MOOC, https://onlinecourses.nptel.ac.in/noc22_oe04/course
4. Srinivasan Chandrasekaran. 2022. Offshore Structures Under Special Environmental Loads Including Fire Resistance, Re-run Video course on MOOC at NPTEL Portal, https://onlinecourses.nptel.ac.in/noc22_oe01/preview
5. Srinivasan Chandrasekaran. 2021. Offshore structures under special loads including fire resistance, Re-run Video course on MOOC at NPTEL Portal
6. Srinivasan Chandrasekaran. 2021. Computer methods of structural analysis of offshore structures, Re-run Video course on MOOC at NPTEL Portal

7. Srinivasan Chandrasekaran. 2021. Dynamics of ocean structures, Re-run Video course on MOOC at NPTEL Portal
8. Srinivasan Chandrasekaran. 2020. Offshore structures under special loads including fire resistance, Re-run Video course on MOOC at NPTEL Portal
9. Srinivasan Chandrasekaran. 2020. Computer methods of structural analysis of offshore structures, Re-run Video course on MOOC at NPTEL Portal
10. Srinivasan Chandrasekaran. 2020. Dynamics of Ocean structures, Re-run Video course on MOOC at NPTEL Portal
11. Srinivasan Chandrasekaran. 2019. Offshore structures under special loads including fire resistance
12. Srinivasan Chandrasekaran. 2018. HSE practices for offshore and petroleum industries
13. Srinivasan Chandrasekaran. 2018. Risk and Reliability of offshore structures
14. Srinivasan Chandrasekaran. 2018. Structural Health Monitoring, Video course on MOOC at NPTEL Portal
15. Srinivasan Chandrasekaran. 2017. HSE practices for offshore and petroleum industries
16. Srinivasan Chandrasekaran. 2017. Offshore structures under special loads including fire resistance, Video course on MOOC at NPTEL Portal
17. Srinivasan Chandrasekaran. 2017. Computer methods of structural analysis of offshore structures, Video course on MOOC at NPTEL Portal
18. Srinivasan Chandrasekaran. 2016. HSE for offshore and petroleum engineers-Practices, Video course on MOOC at NPTEL Portal
19. Srinivasan Chandrasekaran. 2016. Risk and Reliability of offshore structures, Video course on MOOC at NPTEL Portal
20. Srinivasan Chandrasekaran. 2015. Dynamic analysis of offshore structures, Re-run Video course on MOOC at NPTEL Portal
21. Srinivasan Chandrasekaran. 2015. HSE for offshore and petroleum engineering, Re-run Video course on MOOC at NPTEL Portal
22. Srinivasan Chandrasekaran. 2013. Advanced Marine Structures, Video course available at NPTEL Portal
23. Srinivasan Chandrasekaran. 2013. Dynamics of Ocean Structures, Video Course available at NPTEL Portal
24. Srinivasan Chandrasekaran. 2013. Ocean structures and materials, Video course available at NPTEL Portal
25. Srinivasan Chandrasekaran. 2012. Health, safety and Environmental Management (HSE) in Petroleum and Offshore Engineering, Video course available at NPTEL Portal

Textbooks authored

1. Srinivasan Chandrasekaran and Gaurav Srivastava. 2022. Fire-resistance design of structures, CRC press, USA (in Press)
2. Srinivasan Chandrasekaran, Faisal Khan Rouzbeh Abbassi. 2022. Wave energy devices: Design, Development and Experimental studies, CRC Press, ISBN: 9781032250755
3. Srinivasan Chandrasekaran, Arvind Kr. Jain Nasir Shafiq M. Mubarak A. Wahab. 2021. Design aids for offshore platforms under special loads, CRC press, Florida, pp. 280, ISBN: 9781032136844.
4. Srinivasan Chandrasekaran, and R. Nagavinothini. 2020. Offshore compliant platforms: Analysis, design and experimental studies, Wiley, U.K, Wiley, U.K, ISBN: 978-1-119-66977-7.
5. Srinivasan Chandrasekaran, 2020. Design of Marine Risers with Functionally Graded Materials, Woodhead Publishing, Elsevier, pp. 200, ISBN: 978-0128235379.

6. Srinivasan Chandrasekaran, 2020. Offshore Semi-Submersible Platform Engineering, CRC Press, Florida, pp. 240, ISBN: 978-0367673307.
7. Srinivasan Chandrasekaran. 2019. Structural Health Monitoring with application to offshore structures, World Scientific Publishing Co, Singapore, ISBN: 978-971-12-0108-0.
8. Srinivasan Chandrasekaran. 2019. Advanced steel design of structures, CRC press, Florida, ISBN: 978-036-72-3290-0.
9. Srinivasan Chandrasekaran. 2018. Advanced structural analysis with MATLAB, CRC Press, Florida, USA, ISBN: 978-036-70-2645-5.
10. Srinivasan Chandrasekaran. 2017. Dynamic analysis and design of ocean structures, Springer, 2nd Ed., Singapore. ISBN:978-981-10-6088-5.
11. Srinivasan Chandrasekaran, and Gaurav Srivastava. 2017. Design aids for offshore structures under special environmental loads including fire resistance, Singapore ISBN 978-981-10-7608-4.
12. Srinivasan Chandrasekaran. 2016. Health, safety and Environmental Management for offshore and Petroleum Engineers, John Wiley and Sons, U.K., ISBN: 978-11-192-2184-5.
13. Srinivasan Chandrasekaran. 2016. Offshore Structural Engineering: Reliability and Risk Assessment, CRC Press, Florida, ISBN: 978-14-987-6519-0.
14. Srinivasan Chandrasekaran, and A.K.Jain 2016. Ocean structures: Construction, Materials and Operations, CRC Press, Florida, ISBN: 978-149-87-9742-9.
15. Srinivasan Chandrasekaran. 2015. Advanced Marine structures, CRC Press, Florida (USA), ISBN 978-14-987-3968-9.
16. Srinivasan Chandrasekaran. 2015. Dynamic analysis and design of ocean structures, Springer, INDIA, ISBN: 978-81-322-2276-7.
17. Srinivasan Chandrasekaran. 2014. Advanced Theory on Offshore Plant FEED Engineering, Changwon National University Press, Republic of South Korea, pp.237. ISBN:978-89-969-7928-9.
18. Srinivasan Chandrasekaran, Luciano Nunzinate Giorgio Seriino Federico Caranannate 2009. Seismic Design Aids for Nonlinear analysis of Reinforced Concrete Structures, CRC Press, Florida (USA), ISBN: 978-14-398-0914-3.
19. Srinivasan Chandrasekaran, and Subrata Kumar Bhattacharyya 2012. Analysis and Design of Offshore Structures with illustrated examples. Human Resource Development Center for Offshore and Plant Engineering (HOPE Center), Changwon National University Press, Republic of Korea ISBN: 978-89-963-9155-5, pp. 285.

Books edited

1. Srinivasan Chandrasekaran, Shailendra Kumar and Seeram Madhuri (Eds). 2021. Recent advances in structural engineering, Springer, ISBN:978-981-33-6388-5.

2. Chandrasekaran S, Shukla, SK Das, BB Kolathayar, S (Eds). 2020. Smart Technologies for Sustainable Development, Springer, ISBN: 978-981-15-5000-3.
3. Srinivasan Chandrasekaran, N. Madhavi Saravanakumar Sampath. 2015. Advances in Structural Engineering, V. Matsagar (Ed). Force Reduction on Ocean Structures with Perforated Members, pp. 647-661, DOI:978-81-322-2190-6_52, © 2015, Springer.
4. Srinivasan Chandrasekaran, N. Madhavi. 2015. Advances in Structural Engineering, V. Matsagar (Ed). Variations of Water Particle Kinematics of Offshore TLPS with Perforated Members: Numerical Investigations, pp. 629-645, DOI: 978-81-322-2190-6_51, © 2015, Springer.