Dr. Sandeep Shivram Pendhari

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Associate Professor

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Academic, Research and Administrative Experience	**Veermata Jijabai Technological Institute, Mumbai** *(July 2011 to till date)* **Position held: Associate Professor** • Teaching to under-graduate and post-graduate students of civil and structural engineering department. 　Course thought till date are, 　➢ Applied mechanics, Mechanics of solids, Structural analysis I and II, Design of Reinforced and Pre-stressed Concrete Structures, Design of steel structures and Advanced Structural Analysis at under-graduate level. 　➢ Continuum Solid Mechanics, Advanced structural mechanics, Mechanics of plates and shells and Dynamics of structures at post-graduate level. • Supervision to under-graduate dissertation, master dissertations and PhD thesis. • Conducted short term training faculty developments. • Involved in administrative activities at institute and department level. [Separate sheet attached with all details.] • Involved in departmental material testing activities. • Involved in industrial consultancy projects. • Involved as expert member various committees at Central and State Government level.
Research Experience	**Indian Institute of Technology Bombay, Mumbai** *(July 2002 to Dec 2006)* **Position held: Research Scholar** • Research in computational mechanics, finite element method and application of fiber reinforced polymer in civil engineering. • Involved in proof checking activities. • Involved in departmental activities- computer administration, introductory lecture for STAAD-Pro, teaching assistance, exam supervision, etc.
Industry Experience	**Zentech India, Mumbai** *(July 2008 to July 2011)* **Position held: Structural Engineer** • Moss Krylov Octabuoy- Semi submergible structure:- Local finite element analysis. • Helix Energy- Helix Production Unit:- Global and finite element analysis. • Offshore Specialty Fabricators- DB BB Kallop:- Crane pedestal strength calibration. • Noble Drilling Services- NAR Fairleads and winch-lass support analysis, NGt thruster static and dynamic analysis, NTM helideck non-linear analysis, NDB global analysis, NLoB global analysis for grounded conditions, NRE thruster free vibration analysis, NRE crane boom rest structure analysis and design, NRE crane pedestal local analysis with global bending effect, NJD pontoon checks for sea fastening loads and cribbing pressure. • National Drilling Company- Al-Ghweifat Jackup Rig- Spud-can analysis.

- Huisman- NGt thruster static and dynamic analysis, local design checks, analysis and design of chain locker decks.
- Sea Drill Americas Inc- West Sirius Semi-submersible:- Feasible design of direct acting tensioner (DAT) system and detailed finite element analysis of proposed DAT system.
- Transocean Offshore Deepwater Drilling: TDS dolly finite element analysis for self weight including equipments, vessel motion and wave loadings.
- MHD Offshore Group: Third party review of riser tensioner system for floating production vessel MINDOC.
- Pride International Inc: Drop analysis for PND drill floor, wellhead platform and protection sub structure.

GE India, Bangalore (*May 2007 to June 2008*)

Position held: Research Engineer

- Internal pressure analysis- water meter, sprinkler valve, hydrometer, boiler valve, geyser tank, water filter enclosure, battery casing, etc.
- Static and buckling analysis of 0.25mm thin film.
- Static and impact analysis for railway AC bogie cladding.
- Static analysis of pully for belt tension and centrifugal force.
- Static and drop analysis of laptop cover, helmet body and pelican case
- Static and dynamic analysis of inverter housing for bolt tension
- Thermal stress analysis for Rehema hydraulic component.
- Static analysis- chairs, fender frame, etc.

FEAST Software Pvt Ltd, Mumbai (*Feb 2007 to April 2007*)

Position held: Project Leader (on contract)

- FORTRAN programming for stress analysis of composites.
- Fatigue life estimation of Railway Bridge.
- Supervision and guided to offshore software development group.

SPA Consultant Pvt Ltd, Mumbai (*August 2001 to June 2002*)

Position held: Design Engineer

- Nav-Rehama G+12 Residential Building- Analysis and design.
- Timber structure strengthening.
- Coordinating between Architect and Owner.

Rajshi Construction Pvt Ltd, Mumbai (*Jan. 1997 to Dec. 1997*)

Position held: Site Engineer

- Site supervision, quantity assurance, estimation, billing for sub-contractors, etc.
- Attending the builder, architect and consultant.

Author Index and Citation Details

Domain	Author Index	Total Citation	
Web Science	7	350	*Till Feb. 2024*
Scoups	8	447	
Research Gate	8	524	
Google Scholar	8	831	

Publications | Separate sheet attached with all details.

Lecture Delivered	Separate sheet attached with all details.
Research Interest	- Computational Mechanics and Modelling - Finite Element Method - Smart Material Modelling - Application of FRPC in Civil Engineering - Concrete Technology
Education Details	**Doctor of Philosophy (PhD) [Structural Engineering]-** Indian Institute of Technology Bombay (2007). **Bachelor of Engineering [Civil Engineering]-** Mumbai University, V.J.T.I. Mumbai (2001). **Licentiate Civil and Environmental Engineering-** V.J.T.I. Mumbai (1998).
Membership and License	- Member of American Society of Civil Engineering (ASCE). - Member of American Society of Mechanical Engineering (ASME). - Life time member of Indian Association for Computational Mechanics (IndACM). - Life time member of Indian Association for Structural Engineering (IASE). - Life time member of Association of Structural Rehabilitation (ASTR). - Authorized structural engineer licensee from BMC.

Computer Skills	Languages	Fortran, Matlab
	Engineering Software's	STRUCAD, STAAD PRO, ABAQUS, ANSYS, NASTRAN, FEMAP, HYPERMESH
	Application Software	MS Office, Office 2007

Achievements	- International author index is 6 at present based on Web Science, Scopus and Google scholars web page. - Silver medal for scoring second highest in LC& EE. - Ratan Tata Trust scholarship for the year 1995 to 2000. - Oriental Thrust scholarship for the year 1994 to 2001. - Mahalakshmi Trust scholarship for the year 1994-1996. - Research assistantship for the periods of five years from July 2002 to July 2007 awarded from IIT Bombay and MHRD. - Selected as EFIP candidate (AICT) for the year 2006.
Examiner Association and Other Activities	Separate sheet attached with all details.
Personnel Details	Date of Birth : 15th August 1978 Gender : Male Martial Status : Married
Declaration and Signature	The information given above is true to the best of my knowledge and belief.
	Place: Navi Mumbai **Dr. Sandeep S. Pendhari**

Involvement in Major Administrative Activities at Institute/Department Level

- TEQIP III, Nodal Procurement Coordinator, Veermata Jijabai Technological Institute, from July 2017 to Dec. 2021.
- Head of Structural Engineering Department, Veermata Technological Institute, from Sept. 2019 to August 2021.

Involvement in Minor Administrative Activities at Institute/Department Level

- Department level NBA coordinator from the year 2015 to 2021.
- Department level Time-table coordinator from the year 2013 to 2018.
- Department level Exam coordinator from the year 2013 to 2018.
- Faculty In-charge for the departmental Concrete Technology laboratory from 2017 to till date.
- Department level faculty mentor for final year undergraduate student for academic year 2018-2019.
- Department level Syllabus Revision Coordinator from Sept. 2020 to August 2022
- Member of undergraduate admission committee for the year 2016.
- Faculty advisor for Institute Entrepreneur Cell from August 2018 to July 2020.
- Member of Institute level online exam moderation committee for the year 2020.
- Convenor of Institute Canteen Committee from Jan. 2021 to till date.
- Member of Institute Internal Quality Assurance Cell from Jan. 2021 to till date.
- Member of Institute Unfair Means Committee from Jan. 2021 to till date.
- Member of Institute Internal Complaints Committee from July 2022 to till date.

Association of Expert Member in Committees

- Subject expert of National Board Accreditation (NBA) undergraduate, postgraduate, diploma as well as compliance teams for Civil and Structural Engineering specialization from Oct. 2018 to till date.
- Subject expert member of Departmental level board of studies of Civil Engineering Department of NIMMS College, Mumbai, from 2018 to 2021.
- Member of technical committee of MMRDA for scrutinize and negotiate the proposal of NHSRCL in the year 2018.
- Member of subject expert committee of Academic audit of PGDM program of Chetana's Institute of Management and Research conducted on 23rd July 2022.

Involvement in Conference Organization

Worked as **Organizing Secretary** for "Sixth International Congress on Computational Mechanics and Simulation (ICCMS2016)" during 27th June 2016 to 1st July 2016, jointly organized by Indian Institute of Technology Bombay (IIT Bombay) and Veermata Jijabai Technological Institute (VJTI) Mumbai.

Association as a Reviewer for Referred Journal Papers

- Subject reviewer for Mechanics for Advanced Composite Structures.
- Subject reviewer for Computational Engineering and Physical Modelling.
- Subject reviewer for Advances in Aircraft and Spacecraft Science.
- Subject reviewer for Australian Journal of Mechanical Engineering

List of Publications

Chapters Contribution in Edited Books

1. Kant, T. and **Pendhari, S.S**. (2014). "High-order theory, Composite plates." Encyclopedia of Thermal Stresses, Edited by R.B. Hetnarski , pp. 2253-2267.

2. Kant, T. and **Pendhari, S.S**. (2014). "Thick plate, Reissner-Mindlin theory- Statical problem." Encyclopedia of Thermal Stresses, Edited by R.B. Hetnarski , pp. 6109- 6119.

Refereed Journal Publications

3. **S.S. Pendhari**, T. Kant, and Y.M. Desai (2006). "Non-linear analysis of reinforced concrete beams strengthened with polymer composite." *Structural Engineering and Mechanics (SEM)- An International Journal,* **24**(1), pp. 1-18.

4. Tarun Kant, **Sandeep S. Pendhari** and *Yogesh* M. Desai (2007). "A general discretization methodology for interlaminar stress computations in composite laminates." *Computer Modeling in Engineering and Science (CMES)*, **17**(2), pp. 135-161.

5. Tarun Kant, **Sandeep Pendhari** and Yogesh Desai (2007). "On accurate stress analysis of composite and sandwich narrow beams." *International Journal for Computational Methods in Engineering Science and Mechanics (IJCMESM),* **8**(3), pp. 165-177.

6. Tarun Kant, **Sandeep S. Pendhari** and Yogesh M. Desai (2007). "A new partial finite element model for statics of sandwich plates." *Journal of Sandwich Structures and Materials (JSSM)*, **9**(5), pp. 487-520.

7. Tarun Kant, **Sandeep S. Pendhari** and Yogesh M. Desai (2007). "A novel finite element-numerical integration model for composite laminates supported on opposite edges." *ASME Journal of Applied Mechanics (ASME-JAM)*, **74**(6), pp. 1114-1124.

8. Tarun Kant, **Sandeep S. Pendhari** and Yogesh M. Desai. (2007). "Two-dimensional stress analysis of laminates under thermal loads." *Proceeding of Indian National Science of Academy (INSA)*, **73**(3), pp. 137-145.

9. Tarun Kant, Avani B. Gupta, **Sandeep S. Pendhari** and Yogesh M. Desai (2008). "Elasticity solution of cross-ply composite and sandwich plates." *Composite Structures,* **83**, pp. 13-24.

10. Tarun Kant, Yogesh Desai and **Sandeep Pendhari** (2008). "Stress analysis of laminates under cylindrical bending." *Communication in Numerical Methods in Engineering (CNME)*, **24**(1), pp. 15-32.

11. Tarun Kant, **Sandeep S. Pendhari** and Yogesh M. Desai. (2008). "An efficient semi-analytical model for composite and sandwich plates subjected to thermal loads." *Journal of Thermal Stresses (JTS)*, **31**(1), pp. 77-103.

12. **Sandeep Pendhari**, Tarun Kant and Yogesh M. Desai. (2008). "Application of composite materials in civil engineering: A general review." *Composite Structures*, **84**(2), pp. 114-124.

13. Tarun Kant, **Sandeep S. Pendhari** and Yogesh M. Desai. (2008). "A new partial discretization methodology for narrow composite beams in plane stress condition." *International Journal of Computational Methods (IJCM)*, **5**(3), pp. 381-401.

14. **Sandeep S. Pendhari**, Tarun Kant, Yogesh M. Desai and C Venkata Subbaiah. (2010) "On deformation of functionally graded narrow beams under transverse loads." *International Journal of Mechanics of Materials and Design (IJMMD)*, **6**, pp. 269-282.

15. **Sandeep S. Pendhari**, Tarun Kant, Yogesh M. Desai and C Venkata Subbaiah. (2012) "Static solution of functionally graded simply supported plates." *International Journal of Mechanics of Materials and Design (IJMMD)*, **8**(1), pp. 51-69.

16. **Sandeep S. Pendhari,** Sameer Sawarkar and Yogesh M. Desai. (2015) "2D semi-analytical solutions for single layer piezoelectric laminate subjected to electro-mechanical loading." *Composite Structures.* **120**, pp.326-333.

17. Kedar S. Shinge, Bhagyashree B. Warad, Shreyans B. Rathod and **Sandeep S. Pendhari**. (2015) "Partial replacement of cement in mortar by using red mud and rice husk ash." *International Journal of Scientific & Engineering Research*, **6**(9).

18. Sameer Sawarkar, **Sandeep S. Pendhari** and Yogesh M. Desai. (2016) "Semi-analytical solutions for static analysis of piezoelectric laminates." *Composite Structures*, 153, pp. 242-252.

19. Kole K.K., Gotmare V.D. and **Pendhari S.S.** (2016) "Ecological and economical advantages of utilization of textile waste material in construction industry." *Sasmira- Man Made Textile in India*, XLIV(7), pp. 239-243.

20. **Sandeep S. Pendhari**, Sameer S. Sawarkar, Yogesh M. Desai and Nilesh Patil (2016) "Three dimensional static solutions for simply supported single layer piezo-electric plates." *Proceeding of Indian National Science of Academy (INSA)*, 82, pp. 1303-1315.

21. **Sandeep S. Pendhari**, Mihir Mahajan and Tarun Kant. (2017) "Static Analysis of functionally graded laminates according to power-law variation of elastic modulus under bidirectional bending." *International Journal of Computational Methods (IJCM)*, 14(2), pp. 1750055-1-35.

22. **Sandeep S. Pendhari** and Sharwari Kulkarni. (2019) "Exact 2D thermo-mechanical stress analysis of exponentially graded FG laminate." *International Journal of Scientific & Engineering Research*, **10**(12), pp. 551-570.

23. **Sandeep S. Pendhari** and Sharwari Kulkarni. (2020) "Assessment of exact and assumed through thickness temperature distribution for exponentially varied FG laminates." *International Journal of Creative Research Thoughts*, **8**(4), pp. 3775-3788.

24. Sharwari Kulkarni and **Sandeep S. Pendhari**. (2020) "Cylindrical Bending of Power Law Varied Functionally Graded Laminate Subjected to Thermo-Mechanical Loading." Journal of Computational Engineering and Physical Modeling, 3(4), pp. 22-46.

25. Sameer Sawarkar, **Sandeep Pendhari**, Yogesh Desai and Tarun Kant. (2020) "Electroelastic Analysis of Simply Supported Functionally Graded Laminated and Sandwich Piezoelectric Plates." *International Journal for Computational Methods in Engineering Science and Mechanics (IJCMESM),* 21(6), pp. 321-330.

26. Sharwari Kulkarni and **Sandeep S. Pendhari**. (2021) "3D semi-analytical solutions for functionally grade power law varied laminate subjected to thermo-mechanical loading." *Journal of Computational Engineering and Physical Modeling*, 4(3), pp. 70-98. [DOI: 10.22115/CEPM.2021.265578.1148].

27. Himanshu Sawhney, Kedar Pakhare, Rameshchandra Shimpi, P.J. Guruprasad, **Sandeep Pendhari** and Yogesh M. Desai. (2022) "Flexure of shear deformable L'evy plates using new first-order shear deformation theory and generalised segmentation technique". *Composite Structures,* 279, 114867. [DOI: 10.1016/j.compstruct.2021.114867].

28. Vinay V. Gupta, G.R. Reddy and **Sandeep S. Pendhari**. (2022) "Performance-Based Design of RC Structures Subjected to Seismic Load Using a Hybrid Retrofitting Method with Friction Damper and Steel Bracing." *Journal of Computational Engineering and Physical Modeling*, 5(1), pp. 19-35. [DOI: 10.22115/CEPM.2022.317119.1191].

29. Vipin V. Gupta, G.R. Reddy and **Sandeep S. Pendhari**. (2022) "Response control of structures subjected to multi-hazards of earthquake and wind using base isolators and absorbers." *Journal of Computational Engineering and Physical Modeling*, 5(2), pp. 19-44. [DOI: 10.22115/CEPM.2022.317125.1192].

30. Sunil Yadav, Somnath Damse, **Sandeep Pendhari**, Keshav Sangle and Atteshamuddin S. Sayyad (2022) "Comparative studies between Semi-analytical and shear deformation theories for functionally graded beam under bending." *Forces in Mechanics*, 8, 100111. [DOI: 10.1016/j.finmec.2022.100111].

31. S. Sawarkar and **S. Pendhari** (2022) "Functionally Graded Piezoelectric Plates in Cylindrical Bending by Semi-analytical Approach." *Mechanics of Advanced Composite Structures,* 9, pp. 409–424. [DOI:10.22075/macs.2022.25808.1376].

32. Sandeep Ranshur, Abhay Bambole and **Sandeep Pendhari**. (2022)" Axial and Lateral Load performance of reinforced earth-filled wall-panels- an experimental investigation." *Mathematical Statistician and Engineering Applications*, 71(**4**), pp. 6449-6460. [ISSN: 2094-0343].

33. Sunil S. Yadav, Keshav K. Sangle, Swapnil A. Shinde, **Sandeep S. Pendhari**, Yuwaraj M. Ghugal (2023) "Bending analysis of FGM plates using sinusoidal shear and normal deformation theory." *Forces in Mechanics*, 11, 100185. [DOI: 10.1016/j.finmec.2023.100185].

34. Sunil Yadav, Parag Pandare, **Sandeep Pendhari**, Keshav Sangle and Y.M. Ghugal (2023) "Static analysis of an exponentially varying functionally graded beam using trigonometry shear deformation theory." *Composites: Mechanics, Application: An International Journal*, **14(**3), pp. 1-23. [DOI: 10.1615/CompMechComputApplIntJ.2023047080].

35. **S. Pendhari**, S. Harwande, S. Kulkarni, T. Vora and J. Visariya (2023) "Quick Review and Assessment of Thermal Stress Analyses for Exact and Assumed Temperature Distribution for Composite and Sandwich Laminates." *Mechanics of Advanced Composite Structures*, **10**, pp. 343-362. [DOI: 10.22075/macs.2023.24592.1359].

36. Sunil S. Yadav, Keshav K. Sangle, Mandar U. Kokane, **Sandeep S. Pendhari**, Yuwaraj M. Ghugal (2023) "Bending analysis of exponentially varied FG plates using trigonometric shear and normal deformation theory." *Advances in Aircraft and Space Science*, **10**(3), pp. 281-302. [DOI:10.12989/aas.2023.10.3.281].

37. Sharwari Kulkarni and **Sandeep S. Pendhari**. (2023) "Comparison of thermal stresses for exponential and actual temperature gradient along the depth of E-FG plate." *Journal of King Saud University-Engineering Sciences*, 35, pp. 270-78. [DOI: 10.1016/j.jksues.2021.03.005].

Conference Proceedings

38. **Pendhari, S.S.**, Kalani, M., and Kant, T. (2004). "Fibre reinforced polymer composites for rehabilitation of structures." *Proceeding of International Seminar on Costal Area Construction Management, Mumbai,* India, Nov. 1-2, pp. 218-224.

39. **S.S. Pendhari**, T. Kant, and Y.M. Desai. (2005). "Modeling of reinforced concrete beams strengthened with composites." *Proceeding of International Conference of Structural and Road Transportation Engineering, IIT-Kharagpur*, India, Jan. 2-5, pp. 79-85.

40. T. Kant, **S. Pendhari**, P. Desai, M. Gadgil, and Y. Desai (2005). "On a semi discretization method for three dimensional boundary value problems." *Proceeding of SEC2005, An International Meet, IISC Banglore,* India, Dec. 15-16, pp. 267-270.

41. T. Kant, **S. Pendhari**, P. Desai and Y.M. Desai (2006). "On a novel discretization methodology in anisotropic elasticity." *Proceeding of 7th World Congress on Computational Mechanics*, Los Angeles, USA, July 16-22, pp. 569.

42. Tarun Kant, Yogesh Desai and **Sandeep Pendhari** (2006). "Analysis of laminates under cylindrical bending using numerical integration." *Proceeding of International Congress on Computational Mechanics and Simulation (ICCMS-06), IIT Guwahati,* India, Dec. 8-10, A026, pp. 153-158.

43. Tarun Kant and **Sandeep Pendhari** (2006). "Computational Composite Mechanics- Recent Developments." *Proceeding of International Congress on Computational Mechanics and Simulation (ICCMS-06), IIT Guwahati,* India, Dec. 8-10, K047.

44. Tarun Kant and **Sandeep Pendhari** (2007). "An unified and general dimensional reduction procedure in anisotropic elasticity." *Proceeding of International Conference on Civil Engineering in the New Millennium: Opportunities and Challenges (CENeM07), Bengal Engineering and Science University,* India, Jan. 11-14, STR115.

45. Tarun Kant and **Sandeep Pendhari** (2007). "Layered composite mechanics- a status report." Proceeding *of National Conference on Emerging Technology and Developments in Civil Engineering, Government College of Engineering Amravati,* India, March 22-23, pp. IL1-IL24.

46. Tarun Kant and **Sandeep Pendhari** (2007). "Partial finite element discretiation in elastostatics- a new concept." *Proceeding of 21st Canadian Congress of Applied Mechanics (CANCAM07), Department of Mechanical and Industrial Engineering, Ryerson University*, Toronto, Ontario, Canada, June 3-7.

47. Tarun Kant and **Sandeep Pendhari** (2008). "A partial discretization in elastostatics for layered media." *Proceeding of International Conference on Multiscale Modelling and Simulation, Indian Institute of Science, Banglore,* India, Jan 2-4.

48. Tarun Kant, **Sandeep S. Pendhari** and Sandeep M. Shiyekar (2008). "Advances in Computational Mechanics- State-of-the-art-review." *Proceeding of the Sixth Structural Engineering Convention (SEC-2008), IIT Madras, India, Dec. 18-20,* pp. 1-44.

49. Kant, T., **Pendhari, S.S.** and Shiyekar, S. M. (2009). "Review and assessment of various smeared single layer theories for modeling of composite laminates". *Proceeding of 10th US National Congress on Computational Mechanics (USNCCM-10), Columbus, Ohio, USA, July 16-19*.

50. **Pendhari, S.S**. and Sawarkar S. (2011). "Thermal stress analysis of laminated beams under plane stress conditions of elasticity." *Proceeding of National Conference of Advances in Composites and Solid Mechanics, Vasad, Gujrat, India,* Dec. 7-8, pp. 34-39.

51. **Pendhari**, **S.S.,** Sawarkar, S., and Kant T. (2012). "Semi-analytical solution for piezoelectric laminate under cylindrical bending." *Proceeding of 8th Biennial Conference on Structural Engineering Convention (SEC2012), SVBIT Surat, Gujrat, India*, Dec., pp. 1058-1064.

52. **Pendhari, S.S.**, Sarode, D.D., Alam, I. and Deshmukh, M. (2014). "Value addition to industrial wastes-Some review." *Proceeding of International Conference on Eco-Friendly Technologies for Sustainable Growth (ICEFT-14), M.H. Saboo Siddik College of Engineering, Mumbai, India*, March, 27-28, pp. 172-175.

53. **Sandeep S. Pendhari**, Tarun Kant and Yogesh M. Desai. (2014). "2D stress analysis of functionally graded beams under static loading condition." *Proceeding of the 9th Structural Engineering Convention (SEC-2014), IIT Delhi, India, Dec. 22-24*, pp. 35-42

54. Mahajan, M.P. and **Pendhari, S.S.** (2015). "3D stress analysis of functionally graded plate under static loading conditions." *Proceeding of 4th International Conference on Recent Trends in Engineering and Technology (ICRTET2015), Nashik, Maharashtra, India, July,* pp. 303-307. (published in IJMTER).

55. Salunkhe, O.M. and **Pendhari, S.S.** (2015). "Exact through thickness temperature variation of laminated beam." *Proceeding of 4th International Conference on Recent Trends in Engineering and Technology (ICRTET2015), Nashik, Maharashtra, India, July,* pp. 308-312. (published in IJMTER)

56. Shinge, K.S. and **Pendhari, S.S.** (2015). "Use of red mud for partial cement replacement." *Proceeding of 4th* International *Conference on Recent Trends in Engineering and Technology (ICRTET2015), Nashik, Maharashtra, India, July,* pp. 35-42. (published in IJMTER)

57. **Pendhari, S.S.** and Gaval, V.R. (2015). "3D stress analysis of simply supported functionally graded plate varied exponentially through thickness." *Proceeding of 4th International Conference on Recent Trends in Engineering and Technology (ICRTET2015), Bangkok, Thailand, August,* pp. 73-76.

58. Sawarkar, S., **Pendhari, S.S.** and Desai, Y.M. (2015). "Semi-analytical solutions for electro-mechanical loading of an all-round simply supported smart plate." *Proceeding of International Conference on Beams, Plates and Shells (SPB2015), University of Bologna, Italy*, September, pp. 16.

59. Deshmukh, M.P., Sarode, D.D., **Pendhari, S.S**. and Alam, I. (2015). "Partial replacement of cement in mortar with red mud and ultrafines." *Proceeding of 2nd RN Raikar Memorial International Conference and Banthia-Basheer International Symposium on Advances in Science and Technology of Concrete, Mumbai, India,* 18th and 19th December, pp. 349-353.

60. Kole, S.S, Gotmare, V.D., and **Pendhari, S.S**. (2016). "Study of comparison of sugarcane, coir and recycled polyester fiber as concrete reinforcement material in cement based composite using taguchi and analysis of various technique." *Proceeding of International Conference on Redefining Textiles: Cutting Edge Technology of the Future (RCT-2016), Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, India,* 8th to 10th April, pp. 911-922.

61. **Pendhari, S.S.,** Mahajan, M., Dhangare, P. and Gujar P. (2016). "Static analysis of functionally graded beam for power-law variation of elastic modulus". *Proceeding of Sixth International Congress on*

Computational Mechanics and Simulation (ICCMS2016), Indian Institute of Technology Bombay and Veermata Jijabai Technological Institute, Mumbai, India, 27th June to 1st July, *pp.* 124-127.

62. Jadhav S., **Pendhari, S.S.** and Patil, V. (2016). "Finite element analysis of piezoelectric plate based on first-order shear deformation theory". *Proceeding of Sixth International Congress on Computational Mechanics and Simulation (ICCMS2016), Indian Institute of Technology Bombay and Veermata Jijabai Technological Institute, Mumbai, India,* 27th June to 1st July, pp. 1063-1066.

63. Joshi, A., Gujar, P. and **Pendhari, S.S.** (2016). "Finite element analysis of plain cement concrete". *Proceeding of Sixth International Congress on Computational Mechanics and Simulation (ICCMS2016), Indian Institute of Technology Bombay and Veermata Jijabai Technological Institute, Mumbai, India,* 27th June to 1st July, pp. 877-890.

64. Sawarkar, S., **Pendhari, S.S.** and Desai, Y.M. (2016). "Semi-analytical solutions for functionally graded smart plate in cylindrical bending". *Proceeding of Sixth International Congress on Computational Mechanics and Simulation (ICCMS2016), Indian Institute of Technology Bombay and Veermata Jijabai Technological Institute, Mumbai, India,* 27th June to 1st July, pp. 1303-1306.

65. Gujar, P.S. and **Pendhari, S.S.** (2016). "Static bending analysis of isotropic circular plate using finite element method." *Proceeding of 5th International Conference on Recent Trends in Engineering and Technology (ICRTET2016), Nashik, Maharashtra, India, April,* pp. 492-497. (published in IJMTER).

66. Sawarkar, S.S., **Pendhari, S.S.** and Desai, Y.M. (2016). "Static analysis of functionally graded piezoelectric plate." *Proceeding of Structural Engineering Convention (SEC2016), CSIR-SERC, Chennai, India*, Dec.

67. Sawarkar, Sawarkar, Sandeep Pendhari and Yogesh Desai. (2017). "Thermo-electro-elastic Analysis of Simply Supported Piezoelectric Laminate in Cylindrical Bending", *Engineering Mechanics Institute Conference 2017 (EMI2017)*, San Diego, USA, June 4-7, 2017.

68. Sharawari, Kulkarni and **Sandeep Pendhari**. (2020). "Determination of exact temperature distribution through the depth of functionally varied layered laminate by semi-analytical approach", *Proceeding of International Conference on Advancement on Aeromechanical Materials for Manufacturing (ICAAMM2020)*, MLR Institute of Technology, Hyderabad, India, July 24-25, 2020.

69. Sharawari, Kulkarni and **Sandeep Pendhari**. (2022). "Analytical solutions for power law varied FG laminate subjected to thermomechanical loadings", *Proceeding of 12th Structural Engineering Convention - An International Event (SEC 2022),* MNIT Jaipur, India, Dec. 19-22, 2020, pp. 63-68.

PhD Thesis Supervision

1. Sawarkar Sameer S. (2017). "Semi-Analytical Solutions for Static Analysis of Smart Composite Materials", Indian Institute of Technology Bombay (IITB), Mumbai. (Jointly with Dr. Yogesh M. Desai and Dr. Tarun Kant) [Defended on 19th July 2017].

2. Kulkarni, Sharwari P. (2021). "Thermomechanical Stress Analysis Of Smart Laminated Materials", Veermata Jijabai Technology Institute (VJTI), Mumbai, India) [Defended on 30th August 2021].

3. Himanshu Sawhney (2023). "Analysis of Fiber-reinforced laminated composite plates using Levy's method ", Indian Institute of Technology Bombay (IITB), Mumbai. (Jointly with Dr. Yogesh M. Desai) [Defended on 15th February 2023].

Supervision of Master (MTech) Dissertations

1. Sawarkar, S.S. (2012). "Semi-analytical Solution for Piezoelectric Laminates under Plane Stress and Plane Strain Conditions of Elasticity", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

2. Tare, S.K. (2012). "Seismic Performance of Industrial Building by using Capacity Spectrum Method", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

3. Patil N. (2013). "Semi-analytical Solution for Piezoelectric Plates", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

4. Ghag, S. (2013). "Finite Element Analysis of Plain and Reinforced Concrete Element to Address the Mesh Sensitivity Issue", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

5. Alam, I. (2014). "Use of Bauxite Residue as Partial Cement Replacement", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

6. Adnan, M. (2014). "Fatigue Analysis of Steel Truss Bridge", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

7. Garad, G. (2014). "Reuse of Concrete Waste",Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

8. Kumar, S. (2014). "High Tech Fabric for Building and Construction". Veermata Jijabai Technology Institute (VJTI), Mumbai, India. (Jointly with Dr. V.D. Gotmare)

9. Mahajan, M. (2015). "Static Analysis of Functionally Graded Materials with Power-law Variation". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

10. Shinge, K. (2015). "Use of Industrial Waste Materials for Cement Replacement in Mortar". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

11. Tadvi, A. (2015). "Hygrothermal Analysis of Laminated Materials Based on First-order Shear Deformation Theory". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

12. Jadhav, S. (2015). "Finite Element Analysis of Pizoelectric Laminate Based on First-order Shear Deformation Theory". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

13. Salunkhe, O. (2015). "Exact Thermal Stress Analysis of Laminates Based on Semi-analytical Approach". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

14. Kole, S. (2015). "Utility of Natural and Recycled Fibers in Civil Engineering Area", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

15. Choulwar, A. (2016). "2D Stress Analysis of Laminates Subjected to Mechanical Loading by Using Quadratic Shape Function in Partial Finite Element Methodology". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

16. Singhal, A. (2016). "2D Semi-analytical Solution for Functionally Graded Laminates Subjected to Thermo-mechanical Loading". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

17. Choudhari, K. (2016). "3D Stress Analysis of Laminates Subjected to Mechanical Loading by Using Quadratic Shape Function in Partial Finite Element Methodology". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

18. Joshi, A. (2016). "2D Thermal Stress Analysis of Functionally Graded Laminates by Using Shear Deformation Theory". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

19. Joshi, P. (2017). "Analytical solution of functionally graded beam with material properties variation according to power law under thermos-mechanical loading". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

20. Mahajan, M. (2017). "Finite element modeling to study the dynamic evaluation of building with tuned liquid damper". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

21. Deshmane, B. (2017). "Semi-analytical solution of functionally graded beam with material properties variation according to power law under thermos-mechanical loading". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

22. Patil, G. (2017). "Finite element analysis to improve the soil properties using geogrid encased stone column". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

23. Kamble, K. (2018). "Analytical solution for functionally graded plate under thermos-mechanical loading". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

24. Mutha, N. (2018). "Semi analytical solution for functionally graded plate under thermos-mechanical loading". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

25. Chokshi, P. (2018). "Analytical solution for isotropic and orthotropic plate with mechanical loading by using Ley's techniques." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

26. Harwande, S. (2019). "Exact Thermal Stress Analysis of composite plate based on Semi-Analytical approach." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

27. Shinde, S. (2019). "Bending analysis of functionally graded Plate under mechanical loading using Trigonometric shear deformation theory." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

28. Damase, S. (2019). "Bending analysis of functionally graded beam under mechanical loading using trigonometric shear deformation theory." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

29. Bansod, A. (2019). "Analytical Solution of Orthotropic Plate with Mechanical Loading by using Levy's Technique." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

30. Giniwale, A. (2020). "Mixed Finite Element Analysis of Functionally Graded Beams." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

31. Shah, R. (2020). "Numerical Solution for Functionally Graded Beam subjected to Mechanical loading by using Partial Discretization Methodology." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

32. Bhise, P. (2020). "Finite element analysis of functionally graded beam varied by power law using semi discretization approach." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

33. Gunjal, K. (2020). "Numerical solution for functionally graded plate subjected to mechanical loading by using partial discretization methodology." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

34. Gupta, V. (2021). "Performance Based Design of RC structures subjected to Seismic load using hybrid retrofitting method of Friction damper and Steel bracing." Veermata Jijabai Technology Institute (VJTI), Mumbai, India [Jointly with co-supervisor, Dr. G.R. Redd].

35. Gupta, V. (2021). "Dynamic behaviour of structures with base isolation and absorber." Veermata Jijabai Technology Institute (VJTI), Mumbai, India [Jointly with co-supervisor, Dr. G.R. Redd].

36. Darekar, N. (2021). "Hybrid Sub-structuring Technique for Dynamic Analysis of structure." Veermata Jijabai Technology Institute (VJTI), Mumbai, India [Jointly with co-supervisor, Dr. G.R. Redd].

37. Deshpande, A. (2021). "Control of Blast Load on Structures using Passive Dampers and Base Isolators." Veermata Jijabai Technology Institute (VJTI), Mumbai, India [Jointly with co-supervisor, Dr. G.R. Redd].

38. Patil, A. (2021). "Performance of RC Structures under Seismic and Dynamic Wind Loads using Fluid Viscous and Tuned Mass Damper." Veermata Jijabai Technology Institute (VJTI), Mumbai, India [Jointly with co-supervisor, Dr. G.R. Redd].

39. Khule, D. (2021). "Dynamic Performance of Structures with Buckling Restrained Braced Frames considering Progressive Strains." Veermata Jijabai Technology Institute (VJTI), Mumbai, India [Jointly with co-supervisor, Dr. G.R. Redd].

40. Gorivale S.S. (2022). "3D FE Model based on Partial Discretization Methodology for Functionally Graded Plates Varied According to Powe Law". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

41. Kokane M.U. (2022). "3D Static Analysis for Exponentially Varied Functionally Graded Plates using Trigonometric Shear Deformation Theory. Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

42. Pandare P.M. (2022). "Static Solution for Exponentially Varied Functionally Graded Beam Based on Trigonometric Shear Deformation Theory. Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

43. Momin, S.S. (2023). "Static and Dynamic Assessment of Earth Fill Wall Panels using Finite Element Analysis". Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

44. Ambekar, V.R. (2023). "Assessment of Stress Concentration Factor for Steel Tubular Joints Subjected to Out-of-Plane Loading Based on Empirical and Finite Element Approach." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

45. Kasar, A.D. (2023). "Assessment of SCF for Steel Tubular Joints Subjected to Axial Loading Based on FE Analysis and Empirical Equations." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

46. Kasar, S.V. (2023). "Assessment of SCF for Steel Tubular Joints Subjected to In-of-Plane Bending Load Based on FE Analysis and Empirical Equations." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

47. Dhande, S.R. (2023). "Analysis of Functionally Graded Sandwich Plate by Semi-Analytical Method." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

48. Patil, S.S. (2023). "Analysis of Functionally Graded Sandwich Beams by Semi-Analytical Method." Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

Supervision of Graduate (BTech) Dissertations

1. Sude, S., Tambe, S., Khairnar, P., Patil, S. and Kharvi R. (2013-2014), "Analysis and Design of Offshore Jacket Structures", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

2. Chandsarkar, A., Shejwal, V., Nehete, A., Kadwade, S. and Pawar, R. (2014-2015), "Finite element analysis of plain cement concrete", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

3. Pichare, M., Panditar, A., Masram, K., Mane, K., Moon, P. and Bharda, R. (2015-2016), "Use of red mud for cement replacement in concrete".

4. Shubham Katole, Shraddha Kademwar, Valmik Game and Nishi Yadav (2016-2017), "Finite element analysis of RC beam strengthened with CFRP strips in flexure".

5. Shreekanth Merugu, Akshay Wadettiwar, Shubham Hangarge and Dhruvakumar Veldi (2017-2018), "Optimum Design and Analysis of Transmission Tower".

6. Tanmay Choudhari, Shrutika Gawal, Ankita Ingale and Shraddha Singh (2018-2019)," Lateral stability analysis and design of high-rise building using outrigger system".

7. Jeevankumar Khavare, Himanshu Ramrupe, Sohan Dhande and Debashri Kedar (2019-2020). "On experimental and numerical investigations on tuned liquid damper".

8. Abdul Khan, Chirag Jaiswal, Aditya Amrutkar and Shivani Tavate (2019-2020). "Analytical and Numerical Assessment of RC Beam for Shear Behavior".

9. Avinash Myakal. Saurabh Mahajan, Kartik Fugare and Saurabh Gavande (2020-2021). "Effect of Soil Structure Interaction on Seismic Prone Multistorey Structure".

10. Rushikesh Kejkar, Preet Jiwani, Yash Malpani and Manasi Shahakar (2020-2021). "Comparative Study of Indian Standard Code with AERB Code for Concrete Structures".

11. Tanmay Vora, Aayush Parikh, Jainil Visariya and Shrenil Chovatiya (2021-2022). "Estimation of Scour Depth for A Bridge and Analyzing it Considering the Simultaneous Effects of Scouring and Seismic Forces".

12. Ankit Kharat, Apoorv Kumar, Yusuf Thanawala and Shreeniket Andhale (2021-2022). "Inplace and Fatigue Analysis of Offshore Jacket Structure".

13. Saurabh Bhoyar, Parth Gatne and Rani Khandekar (2022-2023). "Comparative Study of Shear Wall and Bracing under Seismic Loading in Multi-Story Residential Building".

14. Artharva Bais, Riddhi Bhoir, Pradnya Hedgire and Ashutosh Nandurkar (2022-2023). "Analysis and Design of Cable Stayed Bridge with Different Types of Cable Arrangements using MIDAS Software".

Examination of PhD Pre-Synopsis

1. Kanase, A. (2015). "Thermal stress analysis of laminated composite plates using first-order shear deformation theory", Sinhgad College of Engineering, Vadgaon, Pune University, Pune, India.

2. Thurton, D.A. (2017). "The performance of semi-engineered building roof under wind load", College of Engineering Pune, Pune University, Pune, India.

Examination of Master (MTech) Dissertations

1. Kher, A.V. (2009). "Comparative study of primary framing used in Pre-engineered buildings", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

2.   Kamble, N.A. (2009). "Capacity based design of medium rise RCC buildings", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

3.   Maske, R.G. (2010). "Progressive collapse of high-rise steel building under accidental load", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

4.   Durgade, V.V. (2010). "Progressive collapse of low-rise R.C.C. structures under accidental load", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

5.   Daimi, S.N. (2011). "Nonlinear finite element analysis of prestressed concrete beam", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

6.   Mhakungkar, V.G. (2011). "Earthquake analysis of high rise steel frame building with and without bracing", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

7.   Nawle, S.P. (2011). "Analytical study of ultimate strength of post-tensioning slab", Veermata Jijabai Technology Institute (VJTI), Mumbai, India.

8.   Parbat, A.V. (2011). "Elastic solutions for spherical shallow shell", Sinhgad College of Engineering, Vadgaon, Pune, India.

9.   Choudhary, P.B. (2011). "Cylindrical bending of elastic plates", Sinhgad College of Engineering, Vadgaon, Pune, India.

10. Mane, S.H. (2012). "Study of crack propagation in concrete gravity dam by using fracture mechanics concept", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

11. Pandharkar, N.B. (2012). "Plane stress analysis of layered composite and sandwich beam subjected to thermal loading", Sinhgad College of Engineering, Vadgaon, Pune, India.

12. Nikam, S.G. (2014). "Earthquake response of buildings with friction dampers", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

13. Yannawar, N. (2014). "Dynamic evaluation of building with tuned liquid damper", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

14. Pardeshi, M. (2014). "Experimental analysis of tuned liquid damper with baffle wall for controlling the earthquake vibrations",Dr. D.Y. Patil School of Engineering and Technology, Pune, India.

15. Patil, S.B. (2015). "Seismic evaluation and retrofit of existing building", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

16. Patil, V.V. (2015). "Control of structural vibrations by using overhead water tanks as liquid damper", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

17. Suryawanshi, M.D. (2015). "Comparative study if various supporting systems for elevated billboard structures", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

18. Ghodke, P.S. (2015). "Seismic analysis of building with viscoelastic damper", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

19. Gole, N.V. (2015). "Performance based design of reinforced concrete moment resistant frame with soft storey", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

20. Nayak, S.D. (2015). "Effect of stiffeners around opening in infill wall of multi-storied frame building", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

21. Veppur, G.P. (2015). "Study of impact between two equal and unequal building during earthquake", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

22. Narayana, M.T. (2015). "Effect of vertical motion on reinforced concrete structures", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

23. Patil, P.A. (2015). "Analysis of column reinforced with fiber reinforced polymer composites in civil infrastructures", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

24. Wayall, P.V. (2016). "Surface treatment methods and their effects on properties of recycled concrete aggregates", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

25. Bharade, A.S. (2016). "Analysis of steel structures with coated glass fiber reinforced polymers", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

26. Kale, S.S. (2016). "Application of cold rolled forms section in composite construction", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

27. Talela, E.S. (2016). "Physical modeling of structural elements", S.V. National Institute of Technology, Surat, Gujrat, India.

28. Shinde, T.N. (2016). "Understanding behavior of structural elements through physical model", S.V. National Institute of Technology, Surat, Gujrat, India.

29. Nawal, G. (2016). "Physical touching the concepts of structural engineering", S.V. National Institute of Technology, Surat, Gujrat, India.

30. Dhinde, M. (2016). "Analysis of functionally graded plates and beams", Indian Institute of Technology Bombay (IIT Bombay), Mumbai, India.

31. Behar, J.D. (2016). "Structural analysis of laminated composite plates using ANSYS", Sardar Patel College of Engineering (SPCE), Mumbai, India.

32. Atkire, K.K. (2016). "An experimental investigation of RC beam and column using carbon fiber reinforced polymer", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

33. Das, P. (2016). "Effect of bracing on dynamic response of reinforced concrete frame", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

34. Pimple, K.B. (2016). "Critical assessment of RC frames by pushover analysis", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

35. Patil, V. (2016). "Effect of blast loading on soft story building", Rajarshi Shahu College of Engineering, Tathawade, Pune, India.

36. Vikhona, M. (2022). "Finite element analysis of RCC structural slab & grade slab system subjected to low velocity impact load", Homi Bhabha National Institute, Mumbai, India.

Lecture Delivered

1. "Strengthening of concrete structures by using polymer composites", Guest lecture delivered at Sinhgad College of Engineering, Wadgao, Pune, India.

2. "Practical finite element application", Expert lecture delivered at Veermata Jijabai Technological Institute (VJTI) during AICTE approved one-week Short Term Training Program (STTP), Matunga, Mumbai, India (19th April 2012).

3. "Partial finite element method", Expert lecture delivered at Veermata Jijabai Technological Institute (VJTI) during AICTE approved one-week Short Term Training Program (STTP), Matunga, Mumbai, India (20th April 2012).

4. "Application of finite element method and new development", Expert lecture delivered at Indian Institute of Technology Bombay (IIT Bombay) during one-week Quality Improvement Program (QIP), Powai, Mumbai, India.

5. "Practical finite element method- General guidelines", Expert lecture delivered at Veermata Jijabai Technological Institute (VJTI) during one-week Faculty Development Programme (FDP) under TEQIP-II, Matunga, Mumbai, India (20th Feb 2013).

6. "Finite element analysis- Case studies", Expert lecture delivered at Veermata Jijabai Technological Institute (VJTI) during one-week Faculty Development Programme (FDP) under TEQIP-II, Matunga, Mumbai, India (20th Feb 2013).

7. "New Trends in FEM- Partial finite element approach ", Expert lecture delivered at Veermata Jijabai Technological Institute (VJTI) during one-week Faculty Development Programme (FDP) under TEQIP-II, Matunga, Mumbai, India (22nd Feb 2013).

8. "Use of Finite Element Analysis for Practical Application:, Expert lecture delivered at Veermata Jijabai Technological Institute (VJTI) during two day workshop approved by TEQIP-II, Matunga, Mumbai, India (12th March 2014).

9. "Composite Mechanics: Semi analytical and partial finite element approach", Expert lecture delivered at Sanjivani Rural Education Society's College of Engineering during Short Term Training Program (STTP), Kopragaon, Ahmednagar, India (28th April 2015).

10. "Effective application of finite element method in practice", Expert lecture delivered at Sanjivani Rural Education Society's College of Engineering during Short Term Training Program (STTP), Kopragaon, Ahmednagar, India (28th April 2015).

11. "Advancement in composite mechanics", Expert lecture delivered at JSPM's Rajarshi Shahu College of Engineering during two days state level workshop on recent developments in civil engineering, Tathawade, Pune, India (13th Feb 2016).

12. "Design of built-up columns", Expert lecture delivered at Anjuman-I-Islam's- Kalsekar Technical Campus during three days s faculty development programme on Design of Steel Structures using Limit State Method, Navi Mumbai, India (22nd Jan 2017).

13. "Partial finite element analysis and its application to composite laminates", Expert lecture delivered at Sardar Patel College of Engineering during Short Term Training Program (STTP) on Finite Element Analysis and its Applications, Mumbai, India (25th March 2017).

14. "Mechanics of smart laminated materials: Partial discretization techniques", Expert lecture delivered at Indian Institute of Technology Bombay (IIT Bombay) during one-week Quality Improvement Program (QIP), Powai, Mumbai, India (24th May 2018).

15. "Development of partial finite element methodology for laminate structure", Expert lecture delivered at Coimbaiore Institute of Technology during one-week workshop, Coimbaiore, Tamil Nadu, India (20th Feb. 2019).

Training Programmes Coordinated

1. One week AICTE approved short term training programme on "Damage Assessment and Repair Methodology for R.C.C. Structures", organized by Structural Engineering Department of Veermata Jijabai Technological Institute, Period 9th Jan 2012- 13th Jan 2012 (Coordinator).

2. One week faculty development programme under TEQIP II on Performance Based Design of Structures organized by Structural Engineering Department of Veermata Jijabai Technological Institute, Period 22nd March 2012 to 26th March 2012 (Co-coordinator).

3. One week AICTE approved short term training programme on "Application of Finite Element Method in Civil Engineering", organized by Structural Engineering Department of Veermata Jijabai Technological Institute, Period 16th April 2012- 20th April 2012 (Coordinator).

4. One week faculty development programme under TEQIP II "Recent Trends in Finite Element Method and Introduction to Boundary Element and Mesh-free Methods", organized by Structural Engineering Department of Veermata Jijabai Technological Institute, Period 18th Feb 2013 – 22nd Feb 2013 (Coordinator)

5. Two day workshop approved by TEQIP II on "Advanced Finite Element Analysis (Application to solid mechanics, foundation engineering, fluid mechiancs and heat transfer)", organized by Structural Engineering Department of Veermata Jijabai Technological Institute, Period 11th March 2014 and 12th march 2014 (Co-coordinator).

Training Programmes Attended

1. Attended and participated in two days symposium on "Nanotechnology", organized by research scholars forum and sponsored by Industrial Research and Consultancy Center, IIT Bombay on October 2 and 3, 2004.

2. Attended and participated in two-week ISTE workshop on "Introduction to Research Methodology", organized by IIT Bombay from 25th June 2012 to 2th July 2012.

3. Attended and participated in two days National workshop on "Non Destructive Evaluation of Structures", jointly organized by Association of Structural Rehabilitation (ASTR) and Indian Society for Non Destructive Testing (ISNT) during 8th March 2013 and 9th March 2013.

4. Attended and participated in two-week TEQIP II sponsored Faculty Training program on "Recent Trends in Performance Based Design of Structures", organized by Structural Engineering Department of Veermata Jijabai Technological Institute during 3rd June 2013 to 14th June 2013.

5. Attended and participated in one day workshop on "Large Diameter Rock Socketed Piles", jointly organized by IIT Bombay and Deep Foundation Institute on 14th November 2013.

6. Attended and participated in one-week TEQIP II sponsored Faculty Development program on "Form Work and False Work Design", organized by Structural Engineering Department of Veermata Jijabai Technological Institute during 28th March 2013 to 1st April 2013.

7. Attended and participated in four days workshop on "NBA's Outcome Based Accreditation", organized by KJ Somaiya College of Engineering during June 2014.

8. Attended and participated in one-week TEQIP II sponsored Faculty Development program on "CFD in Engineering Domain Using Computing Software's", organized by Structural Engineering Department of Veermata Jijabai Technological Institute during 8th July 2013 to 12th July 2013.

9. Attended and participated in one-week TEQIP II sponsored Faculty Development program on "Project Management Tools and Techniques (PMTT)", organized by Structural Engineering Department of Veermata Jijabai Technological Institute during 22nd August 2013 to 26th August 2013.

10. Attended and participated in one-week TEQIP II sponsored Short Term Training program on "Emerging Trends in Construction Materials and Techniques", organized by Structural Engineering Department of Veermata Jijabai Technological Institute during 17th October 2013 to 21st October 2013.

11. Attended and participated in one-week TEQIP II sponsored Short Term Training program on "Soil Structure Interaction Using Computer and Realistic Constitutive Models", organized by Structural Engineering Department of Veermata Jijabai Technological Institute during 24th February 2014 to 28th February 2014.

12. Attended and participated in one-week GIAN program sponsored by Ministry of Human Resource Development, Government of India in collaboration with Veermata Jijabai Technological Institute on "Advances in Structural Mechanics: Theory and Design of Plates and Shells Structures", organized by Structural Engineering Department of Veermata Jijabai Technological Institute during 20th February 2017 to 25th February 2017.

13. Attended and participated in one-week AICTE sponsored Quality Improvement program (QIP) on "Sustainable Textile Materials: Production and Applications", organized by Department of Textile Manufactures of Veermata Jijabai Technological Institute during 18th December 2017 to 23rd December 2017.

Nature of Consultancy/Testing Projects Involved

1. Structural audit of RCC and steel structures.
2. Proof checking of residential and industrial structural design and drawings.
3. Testing of construction materials (bricks, steel, wood, tiles, concrete, paver blocks, etc.)