



Faculty Profile

Name	Mr. Dhiraj D. Ahiwale					
Department	Civil Engineering					
Designation	Assistant Professor					
Area of Specializations	Structural Engineering, Earthquake Engineering					
Date of Joining the Institute	13/12/2016					
Contact Number	+91-9511864411, +91-9763401305					
Email Id	dhiraj.ahiwale@vpkbiet.org , dhirajahiwale1990@gmail.com					
Qualifications with class/grade	Diploma in Civil Engineering with First Class from Government Polytechnic, Karad, B. E. Civil Engineering with First Class from SVERI, Pandharpur, M. Tech Structural Engineering with First Class from COE, Pune, PhD Civil Engineering from DYPU, Ambi, Pune (Pursuing).					
Total Experience	Teaching	8.5 Years	Industry		Research	
Paper Published (Reputed Journals, Scopus, and SCI)	National	02	International	16		
Paper Presented in Conferences /National /International	National		International	05		
No. of FDP/Workshops/STTPs attended	27					
Books Published/IPRs/Patents						
No. of Projects Guided	UG	6	PG	12	PhD	NA
Professional Memberships	 Life Member of Indian Society for Technical Education (LM108000) Life Member of Alumni Association of COE, Pune-5 (LM-014553) 					
Consultancy Activities	Material Testing under Concrete Technology, Strength of Material and Transportation Engineering Lab.					
Awards & Recognition	 Qualified GATE in 2011. Awarded the M. Tech TEQIP Scholarship. Recognized as Post Graduate Teacher by Savitribai Phule, Pune University. Recognized reviewer of Innovative Infrastructure Solutions (Springer) International Journal of Computers and Concrete (Techno-Press) and International Journal of Engineering and Technology Innovation indexing in Web of Science/SCI/SCOPUS. Appointed as member of external squad for SPPU all examinations centers in Pune District South zone during 05/07/2022 to 19/07/2022. Appointed as a Visiting Faculty in Vidya Pratishthan's School of Architecture, Vidyanagari, Baramati for subject Surveying and Levelling for the Academic year 2017-18. 					
Grants Fetched	Submitted proposal of amount 6, 80,000/- to RGSTC.					
View Google Scholar, Research Gate, SCOPUS & ORCID Profile	 Google Scholar: https://scholar.google.com/citations?user=IsIZjMAAAAJ&hl=en&oi=ao Research Gate: https://www.researchgate.net/profile/Dhiraj Ahiwale2 SCOPUS: https://www.scopus.com/authid/detail.uri?authorId=57218251657 ORCID: https://orcid.org/0000-0002-8526-8641 					





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<u>Iournal Publications:</u>

- 1 **Dhiraj D. Ahiwale,** Denise-Penelope N. Kontoni, Aniket V. Jadhav and Akanksha B. Bawale, (2023). "FEM analysis of the effect of various brick bond patterns on masonry walls under in-plane cyclic loading", Asian Journal of Civil Engineering, Article in press (Scopus-Springer Publication).
- 2 **Dhiraj D. Ahiwale,** and Ajit N. Patil, (2023). "Quantification and parametric investigation for plan asymmetric low-rise steel frame structure considering soil-structure interaction under vertical ground motion", Asian Journal of Civil Engineering, (Scopus-Springer Publication). https://doi.org/10.1007/s42107-023-00644-y
- 3 **Dhiraj D. Ahiwale,** Denise-Penelope N. Kontoni, and Prachi L. Darekar, (2023). "Seismic performance assessment of reinforced concrete frames with different bracing systems", Innovative Infrastructure Solutions, 8, 102, (**Scopus-Springer Publication**). https://doi.org/10.1007/s41062-023-01071-3
- 4 Morkhade, S. G., Jagtap, K. R., Ghorpade, P. S., **Ahiwale, D. D.**, Najm, H. M. (2022). "Buckling performance evaluation of cellular beams strengthened with flange cover plate". Asian Journal of Civil Engineering, 23 (8), pp.1277-90, (Scopus-Springer Publication). https://doi.org/10.1007/s42107-022-00483-3
- 5 **Dhiraj Ahiwale**, Harshada Madake, Nikita Phadtare, Amit Jarande, and Deepak Jambhale, (2022). "Modal analysis of cracked cantilever beam using ANSYS software", Materials Today: Proceedings, 56, 165-170, (Scopus-Elsevier Publication). https://doi.org/10.1016/j.matpr.2022.01.055
- 6 Varsha Patil and **Dhiraj Ahiwale**, (2022). "Damage detection of warren truss bridge using frequency change correlation", Materials Today: Proceedings, 56, 18-28, (**Scopus-Elsevier Publication**). https://doi.org/10.1016/j.matpr.2021.11.483
- 7 **Dhiraj Ahiwale** and Rushikesh Khartode, (2021). "Determination of Bacterial Concrete Strength Using Bacillus Subtilis and Lightweight Expandable Clay Aggregate", American Journal of Agricultural Science, Engineering, and Technology, 5, 351-362. https://doi.org/10.54536/ajaset.v5i2.112
- 8 **Dhiraj Ahiwale,** Prajkta Shaha, Kamatchi Palaniyandi, Chittaranjan Nayak, Rushikesh Khartode and Samadhan Morkhade, (2021). "*Quantification study for roof truss subjected to near-fault ground motions*", Innovative Infrastructure Solutions, 6, 118, (**Scopus-Springer Publication**). https://doi.org/10.1007/s41062-021-00478-0
- 9 **Dhiraj Ahiwale,** Rushikesh Khartode, (2020). "Parametric study for long-span roof truss subjected vertical ground motions", Asian Journal of Civil Engineering, 6, 23, (Scopus-Springer Publication). https://doi.org/10.1007/s42107-020-00320-5
- 10 **Dhiraj D. Ahiwale**, Rushikesh R. Khartode, Kaustubh V. Raut, (2020). "<u>Seismic response for RC frames on sloping ground using pushover analysis</u>", Journal of Structural Engineering and Management, 07 (02) 36-46.
- 11 **Dhiraj D. Ahiwale,** Rushikesh R. Khartode, (2020). "Evaluation seismic response for soft storey building retrofitted with infill, steel bracing and shear wall", Journal of Structural Technology, 05 (02) 1-13. https://doi.org/10.46610/JOST.2020.v05i02.001
- 12 **Dhiraj Ahiwale,** Rushikesh Khartode, Akshay Bhapkar, Giridhar Narule, Kamalkishor Sharma, (2020). "<u>Influence of compressive load on concrete filled steel tubular column with variable thickness</u>", Innovative Infrastructure Solutions, 6, 23, (**Scopus- Springer Publication**). https://doi.org/10.1007/s41062-020-00390-z
- 13 Raut K. V., Morkhade S. G., Khartode R. R., **Ahiwale D. D.,** (2020). "<u>Experimental study on flexural behaviour of light steel hollow flange beam with various stiffening arrangements</u>", Innovative Infrastructure Solutions, 5, 90, (**Scopus-Springer Publication**). https://doi.org/10.1007/s41062-020-00345-4
- 14 **Dhiraj Ahiwale**, Rushikesh Khartode, (2020). "<u>Study of fly ash, rice husk ash and marble powder as partial replacement to cement in concrete</u>", International Journal of ChemTech Research, 13 (03) 315-321. https://doi.org/10.20902/IJCTR.2019.130328

Conference publications

1 **Dhiraj D. Ahiwale,** & Komal B. Jadhav, (2022). "<u>Ultimate behaviour of single-storey steel frame with a cellular beam using Tekla structural designer software</u>", International Conference on Materials, Machines & Information Technology, 24-25 January 2022, Amity University, Jharkhand, Ranchi, India.





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- 2 Dhiraj D. Ahiwale, Rushikesh R. Khartode, Giridhar N. Narule, & Kamalkishor M. Sharma, (2019). "Experimental investigation on manufactured sand CFST column", Proceedings of International Conference on Innovative Trends in Civil Engineering for Sustainable Development (ITCSD-2019), ISBN:978-93-89354-46-1, 13-15 September 2019 organized by NIT Warangal, India.
- 3 Kamalkishor M. Sharma, Giridhar N. Narule, & **Dhiraj D. Ahiwale**, (2019). "<u>Experimental Study on Confinement Effectiveness of Circular Concrete Filled Steel Tubular Column with Variable Thickness under Axial Compression</u>", International Conference on Rehabilitation and Retrofitting of Structures, 24-25 June 2019, organized by VJTI, ASTR, DCSEM and BARC.
- 4 Jayshree Khatal, Giridhar N. Narule, & **Dhiraj D. Ahiwale**, (2019). "<u>Evaluation of strength of concrete by using self-healing bacteria</u>", International Conference on Rehabilitation and Retrofitting of Structures, 24-25 June 2019, organized by VJTI, ASTR, DCSEM and BARC.

Workshop/STTP/FDP Attended

- 1. Participated in AICTE organized FDP on, <u>"Laboratory Practices in Civil Engineering"</u> during 20-24 Feb. 2023, conducted by NITTTR, Chandigarh.
- 2. Attended AICTE Training and Learning (ATAL) Academy Online FDP on <u>"Earthquake Engineering"</u> during 04-08 Jan. 2021, organized by College of Engineering Pune.
- 3. Attended AICTE Training and Learning (ATAL) Academy Online FDP on <u>"Earthquake Response and Vibration Control of Lifeline Structures"</u> during 05-09 July 2021, organized by College of Engineering Pune.
- 4. Attended AICTE Training and Learning (ATAL) Academy Online FDP on "Advances in Earthquake Engineering" during 26-30 July 2021, organized by LBS College of Engineering, Kasaragod.
- 5. Attended AICTE Training and Learning (ATAL) Academy Online FDP on "Design & Construction of Tall Building Structures" during 09-13 August 2021, organized by Vasavi College of Engineering.
- 6. Attended AICTE Training and Learning (ATAL) Academy Online FDP on <u>"Earthquake Analysis and Design using latest Civil Engineering software's"</u> during 18-22 October 2021, organized by Coimbatore Institute of Technology.
- 7. Attended online FDP on <u>"Latex"</u> organized by S. B. Patil College of Engineering, Indapur from 22/04/2020 to 01/05/2020.
- 8. Attended online FDP on <u>"Outcome Based Education: A Step Towards Excellence"</u> organized by Government College of Engineering, Karad, under Margdarshan Scheme of AICTE, New Delhi from 11/05/2020 to 15/05/2020.
- 9. Attended online FDP under ISTE on <u>"Technical Teachers Training"</u> organized by Vidyavardhini Institute of Technology, Pal from 22/05/2020 to 27/05/2020.
- 10. Attended online Webinar on "ANSYS Applications for Civil Engineers" organized by Government College of Engineering Nagpur on 28/05/2020.
- 11. Attended online FDP on "Quantam Geographic Information System (QGIS)" organized by DON BOSCO College of Engineering, Fatorda, Goa from 01/06/2020 to 05/06/2020.
- 12. Attended online FDP on <u>"Performance of Engineering Structures under extreme loading"</u> organized by Vignana Bharathi Institute of Technology (Autonoumus) from 08/06/2020 to 13/06/2020.
- 13. Attended one-week online Faculty Development Program on "Modern Approach in Structural Engineering-2020" during 06-10 July 2020, organized by MGM's Polytechnic Aurangabad.
- 14. Attended AICTE Sponsored Online Short-Term Training Programme (STTP) on "Advances in Finite Element Method for Industry & Research Applications" during 07-12 Sept. 2020, organized by Department of Civil Engineering, Vasavi College of Engineering (Autonomous), Hyderabad.
- 15. Attended online Webinar on "Applications of STAAD. Pro CONNECT in Design of RCC and Steel Structures" organized by Government College of Engineering, Amravati on 29/11/2020.
- 16. Attended AICTE Training and Learning (ATAL) Academy Online FDP on <u>"Earthquake Engineering"</u> during 30 Nov.-04 Dec. 2020, organized by Marwadi Education Foundation's Group of Institutions, faculty of Engineering.
- 17. Attended AICTE Training and Learning (ATAL) Academy Online FDP on <u>"Research Methodology"</u> during 07-11 Dec. 2020, organized by IIIT Dharwad.





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- 18. Participated in Short Term Training Programme through ICT Mode for One Week on "Assessment and Evaluation under Outcome Based Education" during 10-14 June 2019, organized by NITTR, Kolkata.
- 19. Participated in Short Term Training Programme through ICT Mode for One Week on <u>"Principles of RCC Design up to & beyond Limit States, Applications and Limitations of IS:456-2000"</u> during 16-20 September 2019, organized by NITTR, Kolkata.
- 20. Participated in Two Days Workshop on "Bridge Design and Analysis" during 21-22 Sept. 2019, organized by College of Engineering Pune in association with Soha Technologies Pvt. Ltd.
- 21. Participated in DST sponsored National Level One Week Workshop on "Damage Detection and Characterization Strategy of Non-engineering Structures using Piezoelectric Sensors: Theory and Practice" during 23-27 Dec. 2019, organized by VPKBIET, Baramati.
- 22. Attended Two days workshop on <u>"Steel Design Bridging the Gaps: Theory & Practice"</u> held by VPKBIET, Baramati, on 13/01/2018& 14/01/2018.
- 23. One Week AICTE-ISTE approved Refresher Program "SYNERGOGY", held at VPKBIET, Baramati, 24th to 28th Oct. 2017.
- 24. Attended two-week Faculty Development Programme on <u>"Foundation Programme in ICT for Education"</u> held by IIT Bombay from 03/08/2017 to 07/09/2017.
- 25. One Week short training Programme on <u>"Faculty Induction"</u> organized by College of Engineering, Phaltan, from 16th to 20th Aug 2016.
- 26. One Day Workshop on <u>"Teaching Methodology for implementation of Revised Syllabus of Final Year Civil Engineering"</u> organized by Department of Civil Engineering, KIT's College of Engg, Kolhapur, on 04th Aug 2016.

Consultancy Activities

1. Completed <u>water audit consultancy of five public buildings under Saswad Municipal Corporation</u> of rupees twenty thousand (Saswad Municipal Corporation Building, Dr. Babasaheb Ambedkar Bhavan Building, Panchayat Samiti Building, DYSP Office Building and Sub Divisional Office Building).

Achievements/Recognition

- 1. Qualified GATE in 2011.
- 2. Awarded the M. Tech TEQIP Scholarship.
- 3. Recognized as Post Graduate Teacher by Savitribai Phule, Pune University.

University/Institute Contribution

- Participated in ISTE Approved and Sponsored by SPPU Pune One Day Workshop on <u>"Effective Teaching Methodology for Engineering Mechanics 2019"</u> during 27 July 2019, organized by Pimpri Chinchwad College of Engineering Pune.
- 2. Appointed as <u>member of external squad for SPPU all examinations centre in Pune District South zone</u> during 05/07/2022 to 19/07/2022.
- 3. Appointed as a <u>Visiting Faculty in Vidya Pratishthan's School of Architecture</u>, Vidyanagari, Baramati for subject Surveying and Levelling for the Academic year 2017-18.

NPTEL /Udemy/Coursera/Training Program

- 1. Completed NPTEL-AICTE Online certification course on "Qualitative Research Methods and Research Writing".
- 2. Completed NPTEL-AICTE Online certification course on "Teaching and Learning in Engineering" (TALE).
- 3. Completed NPTEL-AICTE Online certification course on "Concrete Technology".
- 4. Completed NPTEL-AICTE Online certification course on "Introduction to Research".
- 5. Completed Udemy Online certification course on "Autocad 2D and 3D practice Drawing".





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- 6. Completed Udemy Online certification course on "Total Station Surveying and Mapping".
- 7. Completed Coursera Online certification course on "Mechanics of Materials I: Fundamentals of Stress & Strain and Axial Loading" authorized by Georgia Institute of Technology and offered through Coursera.
- 8. Completed Coursera Online certification course on <u>"Spreadsheet for Beginners using Google Sheet"</u> authorized by Rhyme and offered through Coursera on 15/05/2020.
- 9. Completed Coursera Online certification course on <u>"Create your First Python Program"</u> authorized by Rhyme and offered through Coursera on 15/05/2020.
- 10. Completed MathWorks Online certification course on "MATLAB Onramp" on 22/04/2020.
- 11. Completed MathWorks Online certification course on "Introduction to Linear Algebra with MATLAB" on 25/04/2020.
- 12. Successfully completed the 12-module course "Energy literacy training".
- 13. Completed short term training program on "Structural Design using STADD.pro" organized at Civil Engineering Software Academy, Pune from 01/05/2015 to 30/05/2015.

Research paper reviewed

- 1. Reviewed a research paper titled on "Mechanical properties of lime and lime-fly ash concretes incorporating waste rubber particles and rubber fibers" for Innovative Infrastructure Solutions Journal (Springer indexing in ESCI, Scopus, UGC-CARE List India).
- 2. Reviewed a research paper titled on <u>"The effect of self-healing additive on the durability of cracked concrete"</u> for Innovative Infrastructure Solutions Journal (Springer indexing in ESCI, Scopus, UGC-CARE List India).
- 3. Reviewed a research paper titled on <u>"Finite Element Simulation of Shear Strength and Flexural Cracking Load of FRP Reinforced Members"</u> for Innovative Infrastructure Solutions Journal (Springer indexing in ESCI, Scopus, UGC-CARE List India).
- 4. Reviewed a research paper titled on <u>"Seismic risk assessment of on-ground concrete cylindrical water tanks"</u> for Innovative Infrastructure Solutions Journal (Springer indexing in ESCI, Scopus, UGC-CARE List India).
- 5. Reviewed a research paper titled on <u>"Feasibility of reusing soap factory effluent water for making concrete"</u> for Innovative Infrastructure Solutions Journal (**Springer indexing in ESCI, Scopus, UGC-CARE List India**).
- 6. Reviewed a research paper titled on <u>"Finite Element Analysis of Tunnel-Soil-Pile Interaction (TSPI) under Seismic Loading by Using Conditional Constitutive Model (CCM)"</u> for Innovative Infrastructure Solutions Journal (Springer indexing in ESCI, Scopus, UGC-CARE List India).
- 7. Reviewed a research paper titled on <u>"Finite element based direct coupling approach for dynamic analysis of dam-reservoir system"</u> for Innovative Infrastructure Solutions Journal (**Springer indexing in ESCI, Scopus, UGC-CARE List India**).
- 8. Reviewed a research paper titled on "A Critical Assessment of existing prediction models on the shear capacity of recycled aggregate concrete beams" for Innovative Infrastructure Solutions Journal (Springer indexing in ESCI, Scopus, UGC-CARE List India).
- 9. Reviewed a research paper titled on <u>"Non-linear finite element analyses of reinforced concrete beam column joints"</u> for Innovative Infrastructure Solutions Journal (**Springer indexing in ESCI, Scopus, UGC-CARE List India**).
- 10. Reviewed a research paper titled on <u>"A regression approach for estimating the permeability of concretes containing different types of aggregates and admixtures"</u> for International Journal of Engineering and technology innovation (Indexing in Web of Science, Scopus).
- 11. Reviewed a research paper titled <u>"Ultimate strength reduction of circular CFT columns due to creep deformation"</u> for Computers and Concrete, An International Journal, Techno press Publication (**Indexing in SCIE, SCI, Scopus**).

Research proposal submitted

1. Dhiraj Ahiwale and Rushikesh Khartode: Submitted Research Proposal on Title "Structural modelling of long-span steel planar frames subjected to vertical ground motion" to Savitribai Phule Pune University under Scheme Assistance for Science and Technology (RGSTC) of amount Rs. 6,80,000/- in the academic year 2022-23.





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- Dhiraj Ahiwale and Rushikesh Khartode: Submitted Research Proposal on Title "Impact of vertical ground motion on long-span steel frame structure embedded with eccentric braced frame" to Savitribai Phule Pune University under Scheme ASPIRE of amount Rs. 2,70,000/- in the academic year 2020-21.
- 3. Dhiraj Ahiwale, Rushikesh Khartode and Samadhan Morkhade: Submitted Research Proposal on Title <u>"Behavior and performance of industrial steel frame structure under bi-directional horizontal and vertical ground motions"</u> to AICTE under **Scheme RPS** (General) of amount **Rs. 23,89,550/-** in the academic year 2020-21.
- 4. Samadhan Morkhade and Dhiraj Ahiwale: Submitted Research Proposal on Title <u>"Experimental and Analytical Investigation to Study the Efficacy of Hybrid High Strength Castellated Steel Beams"</u> to AICTE under Scheme RPS (Rural) of amount Rs. 24,80,000/- in the academic year 2020-21.

IIT Spoken Tutorial Courses Organized for Students

- 1. In the academic year 2021-22 (SEM-II), <u>13 students of the 2020 batch</u> completed and passed the <u>Blender</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 2. In the academic year 2021-22 (SEM-II), <u>07 students of the 2018 batch</u> completed and passed the <u>C</u> Programming IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 3. In the academic year 2021-22 (SEM-II), <u>15 students of the 2019 batch</u> completed and passed the <u>QCad</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 4. In the academic year 2021-22 (SEM-I), <u>22 students of the 2020 batch</u> completed and passed the <u>QCad</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 5. In the academic year 2021-22 (SEM-I), <u>09 students of the 2018 batch</u> completed and passed the <u>Blender</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 6. In the academic year 2020-21 (SEM-II), <u>10 students of the 2020 batch</u> completed and passed the <u>Python 3.4.3</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 7. In the academic year 2020-21 (SEM-II), <u>33 students of the 2019 batch</u> completed and passed the <u>QGIS</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 8. In the academic year 2020-21 (SEM-II), <u>12 students of the 2017 batch</u> completed and passed the <u>LaTex</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 9. In the academic year 2020-21 (SEM-II), <u>18 students of the 2018 batch</u> completed and passed the <u>LaTex</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 10. In the academic year 2020-21 (SEM-I), <u>04 students of the 2017 batch</u> completed and passed the <u>C++ Programming</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 11. In the academic year 2020-21 (SEM-I), <u>05 students of the 2019 batch</u> completed and passed the <u>Python 3.4.3</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 12. In the academic year 2020-21 (SEM-I), <u>15 students of the 2018 batch</u> completed and passed the <u>QCad</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 13. In the academic year 2020-21 (SEM-I), <u>06 students of the 2017 batch</u> completed and passed the <u>C Programming</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.
- 14. In the academic year 2020-21 (SEM-I), <u>13 students of the 2019 batch</u> completed and passed the <u>QCad</u> IIT Spoken Tutorial Certification course organized by Mr. D. D. Ahiwale.