

Name of Faculty Dr. VISHAL SINGH  
 Designation Assistant Professor  
 Nature of Job/Appointment Regular  
 Date of Joining 11 – 09 -2023  
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#### Education Qualifications

	Name of the Degree	Class
Ph. D	PhD. (Structural Engineering), BITS PILANI	First Class
PG	M. Tech (Structural Engineering), KIIT Deemed to be University	First Class
UG	B. Tech (Civil Engineering), WBUT	First Class

#### Work Experience

Teaching	1 Years and 10 months post B. Tech and 1 Years and 3 months Post PhD.
Research	--
Industry	--
Others	--

Area of Specialization Composite Structures, Static and Dynamic Stability analysis, Linear and Non-linear vibration analysis, Seismic Analysis.

Professional Memberships --

Responsibilities held at Institution Level --

Responsibilities held at Department Level	1. Mentoring 2. Internship Co-Ordinator for 4 <sup>th</sup> year 3. Co-Ordinator for Student Activities/Achievements 4. Co-Ordinator for Faculty Awards/Achievements
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Research Guidance M. Tech Student Supervised: **01**

Courses Handled at Undergraduate / Post Graduate Level. Concrete Technology, Structural Design LAB, Engineering Mechanics, Concrete Technology LAB, Geotechnical Engineering LAB, AUTO-CAD LAB, Structural Dynamics.

No. of Papers Published National Journals – 0 International Journals –12  
 National Conference – 0 International Conference – 06

Projects Carried out --

Patents --

Technology Transfer --

Invited Speaker (Few Important/Prominent)

- Presented a webinar on "Parametric study on foundation retrofitting using micro-pile" at Global institute of Management and Technology, Krishnanagar, Nadia, West Bengal.
- Presented a webinar as Alumni on "Parametric study on foundation retrofitting using micro-pile" at Surendra Institute of Engineering and Management, Siliguri, West Bengal.
- Presented a webinar on "Introduction to foundation retrofitting" at Civil Center, a product of Oddaka Infratech Pvt. Ltd., Sailashree Vihar, Bhubaneswar, Odisha.
- V. Singh**, Mohapatra B.G. (2021) Parametric Study on Foundation Retrofitting Using Micro-piles. In: Das B., Barbhuiya S., Gupta R., Saha P. (eds) Recent Developments in Sustainable Infrastructure. Lecture Notes in Civil Engineering, vol 75. Springer, Singapore. [https://doi.org/10.1007/978-981-15-4577-1\\_13](https://doi.org/10.1007/978-981-15-4577-1_13).
- Vishal Singh**, Rajesh Kumar, and S. N. Patel. "Dynamic Instability of CNT-Reinforced Composite Plate Under Non-Uniform In-plane Loading." Recent Advances in Computational and Experimental Mechanics, Vol—I. Springer, Singapore, 2022. 381-396.
- Vishal Singh**, Rajesh Kumar, and Shuvendu Narayan Patel. "Parametric instability analysis of functionally graded CNT-reinforced composite (FG-CNTRC) plate subjected to different types of non-uniform in-plane loading." Emerging Trends of Advanced Composite Materials in Structural Applications. Springer, Singapore, 2021. 291-312.

No. of Books/Chapter Published with details

Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops. Other Trainings (Attended and/or Organized).

4. **V Singh**, and R Kumar, B. G. Mohapatra, M. Saha, S N Patel, "Non-linear Vibration of Functionally Graded CNT-Reinforced Composite Plate Subjected to Different Types of Non-uniform In-plane Loading", Recent Developments in Sustainable Infrastructure (ICRDSI-2020)—Structure and Construction Management.
5. Sajeev, D., Azeez, F.A., Kumar, R., **Singh, V.** (2022). Nonlinear Vibration of Functionally Graded Porous-Cellular Timoshenko Beam Subjected to In-Plane Periodic Loading. In: Singh, S.B., Barai, S.V. (eds) Stability and Failure of High-Performance Composite Structures. Composites Science and Technology. Springer, Singapore. [https://doi.org/10.1007/978-981-19-2424-8\\_16](https://doi.org/10.1007/978-981-19-2424-8_16)
1. Vocational Training of R.C.C Bridge construction under public's work department (P.W.D) Siliguri, in 2012-2013 during winter, (44 – Days).
2. Vocational Training under P.W.D - Cooch Behar Road Surveying project at Atia-Bari-Fakirtakia road in 2013), (10 – DAYS).
3. Vocational Training under Simplex Infrastructures Limited on RCC Bridge Construction at Gosanimari, Cooch Behar in 2013 (30-Days).
4. Vocational Training under P.W.D Cooch Behar, Cooch Behar Sub-division-I, Cooch Behar Sub-division-II and Mathabhanga Sub-division in the District of Cooch Behar in 2013-2014, (21 – Days).
5. Indian Geotechnical Society, Bhubaneswar Chapter in association with School of Civil Engineering, KIIT Deemed to be University, Bhubaneswar Organized Two Days Workshop on GEOTECHNICAL INVESTIGATION & SOIL TESTING, 2018.
6. Six Days Faculty Development Program on "Recent Trends in Structural Engineering" conducted by Department of Civil Engineering,SSIPMT, Raipur during 23-31 January 2023. The Course had faculties/experts from CSIR -SERC, Chennai & Government Institutes.
7. Five Days Online Faculty Development Program on "Current research trends in Field of Civil Engineering" Organized by department of Civil Engineering in association with academic Staff College, OP Jindal University, January 16-20, 2023.
8. One Week Faculty Development Program (FDP) on "Integrating Autodesk Fusion 360 in Engineering Subjects." held between 26th June to 01st July, 2023
9. Six Days Faculty Development Program on "Publications Projects (Funded) and Patents (PPP)" 7th July, 2023-12th July, 2023.

Details of Journal Publications/Conferences (National and International)

#### International Journal

1. **Vishal Singh**, R. Vescovini, Rajesh Kumar, S. N. Patel, and Gaurav Watts. (2022) "Nonlinear vibration and instability of a randomly distributed CNT-reinforced composite plate subjected to localized in-plane parametric excitation." Applied Mathematical Modelling, 101 (2022), 453-480.
2. **Vishal Singh**, and Rajesh Kumar (2022). "A semi- analytical framework for time history response of a carbon nanotube- reinforced polymer damped composite plate: Influence of instability regions." Polymer Composites, 43(2), 1186-1212.
3. **Vishal Singh**, and Rajesh Kumar (2022). "A Semi-analytical Framework for Non-linear Dynamic Response of Multi-phase Laminated Composite Plate Under the Transverse Patch and In-plane Pulse Localized Loadings." Mechanics of Advanced Materials and Structures, 1-28.
4. Sumeet Chakraborty, Tanish Dey, **Vishal Singh**, Rajesh Kumar (2022). Thermal Stability Analysis of Three-Phase CNTRFC Cylindrical Shell Panels. Journal of Aerospace Engineering, 35(5), 04022074-1:16.
5. **Vishal Singh**, Rajesh Kumar, Varun Jain, T. Naveen Kumar, and S. N. Patel. (2021) "Semianalytical development of dynamic instability and response of a multiscale laminated hybrid composite plate." Journal of Aerospace Engineering, 34(3), 04021005.
6. **Vishal Singh**, Rajesh Kumar, and S. N. Patel (2021). "Non-linear vibration and instability of multi-phase composite plate subjected to non-uniform in-plane parametric excitation: Semi-analytical investigation." Thin-Walled Structures, 162, 107556.
7. Rajesh Kumar, **Vishal Singh**, S. N. Patel, and Tanish Dey (2021). "Non-linear response and buckling of imperfect laminated composite plates under in-plane pulse forces." Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 235(22), 6328-6344.
8. **Vishal Singh**, Rajesh Kumar, S. N. Patel, and Nishant Roy (2021). "Nonlinear Response and Buckling of Imperfect Plates Under In-Plane Pulse Forces: A Semi-analytical Investigation." Iranian Journal of Science and Technology, Transactions of Mechanical Engineering, 1-16.
9. **Vishal Singh**, Rajesh Kumar, S. N. Patel, Tanish Dey, and Sarat Kumar Panda (2021). "Instability and Vibration Analyses of Functionally Graded Carbon Nanotube–Reinforced Laminated Composite Plate Subjected to Localized In-Plane Periodic Loading." Journal of Aerospace Engineering, 34(6), 04021072.

10. Rajesh Kumar, **Vishal Singh**, Tanish Dey, Dipendu Bhunia, SN Patel, Varun Jain. "Nonlinear analysis of sandwich plate with FG porous core and RD-CNTCFRC face sheets under transverse patch loading". Acta Mechanica, 1-26, 2022.
11. Varun Jain; Rajesh Kumar; Gaurav Watts; Md Rushdie Ibne Islam; **Vishal Singh**. "Size-dependent Nonlinear Free and Forced Vibration analyses of a Functionally Graded Microplate subjected to Transverse Patch Loading". Journal of Engineering Mechanics.
12. Chakraborty, S., **Singh, V.**, Dey, T. et al. Influence of Carbon Nanotubes on Stability and Vibration Characteristics of Plates and Panels in Thermal Environment: A Review. Arch Computat Methods Eng (2023).

#### National Journal

Nil

#### International Conferences:

1. V Singh, B.G Mohapatra, and A. Divyadarshi, "Various Methods of Retrofitting of R.C.C Structures and Masonry Structures – A Review". 2<sup>nd</sup> International Conference on Innovations in Structural Engineering (IC-ISE-2017), 29-31, December 2017, Department of Civil Engineering Osmania University, Hyderabad.
2. V Singh, R Kumar, S N Patel. Post buckling analysis of MWCNT-reinforced composite plates under different types of In-Plane mechanical Loads. Structural Engineering Convention (SEC-2018), 19-21, December 2018, Department of Civil Engineering Jadavpur University, Kolkata.
3. V Singh, and B.G Mohapatra, "Parametric study on Foundation retrofitting using Micro-piles", 1<sup>st</sup> International Conference on Rural Development in sustainable Infrastructure (ICRDSI) – (Materials and Management), 11-13, July, 2019, Department of Civil Engineering, KIIT Deemed to be University.
4. V Singh, and R Kumar, S N Patel, "Dynamic Instability of CNT-Reinforced Composite Plate under Non-uniform In-plane Loading", ICRACEM 2020 1<sup>st</sup> International Conference on Recent Advances In Computational And Experimental Mechanics, 4<sup>th</sup> – 6<sup>th</sup> September 2020, Organized Jointly By Departments of Civil Engineering, Aerospace Engineering, and Ocean Engineering & Naval Architecture IIT Kharagpur.
5. V Singh, and R Kumar, S N Patel, "Non-linear Vibration of Multi-scale Composite Plate under Non-uniform In-plane Periodic Load", 23<sup>rd</sup> International Conference on Composite Structures & 6<sup>th</sup> International Conference on Mechanics of Composites (ICCS 23 & Mechcomp6) 1 – 4 September, 2020 (On Line) Porto, Portugal.
6. V Singh, and R Kumar, B. G. Mohapatra, M. Saha, S N Patel, "Non-linear Vibration of Functionally Graded CNT-Reinforced Composite Plate Subjected to Different Types of Non-uniform In-plane Loading", in 2nd International Conference on Rural Development in sustainable Infrastructure (ICRDSI) – (Research & Practices), at Department of Civil Engineering, KIIT Deemed to be University on 18-21, December 2020.

#### National Conferences

Nil

