

JOURNAL PUBLICATIONS:

1. **Mishra, S., Rao, K. S., Gupta, N. K., & Kumar, A.** Damage to Shallow Tunnels under Static and Dynamic Loading. *Procedia Engineering*, pp. 1322-132 Vol. 173, (2017). <https://doi.org/10.1016/j.proeng.2016.12.171>
2. **Mishra, S., Rao K. S., Gupta, N. K., & Kumar, A.** Damage to Shallow Tunnels in Different Geomaterials under Static and Dynamic Loading. *Thin-Walled Structures*, pp 138-149, Vol 126, (2018). <https://doi.org/10.1016/j.tws.2017.11.051>.
3. Dhamne, R., **Mishra, S., Kumar, A., & Rao, K. S.** Numerical study of the cross-sectional shape of shallow tunnels subjected to impact and blast loading. *Journal of Engineering Geology*, A bi-annual Journal of ISEG, pp 23-38, Volume XLIII, Nos. 1 & 2, (2018). <http://joegindia.com/PAPER/volume-43/FP-03.pdf>
4. **Mishra, S., Kumar, A., Rao, K. S., & Gupta, N. K.** Experimental and Numerical Investigations of Dynamic Response of Tunnels in Soft Rock. *Structures*, Vol. 29, pp. 2162-2173, (2020). <https://doi.org/10.1016/j.istruc.2020.08.055>
5. Zaid, M., & **Mishra, S.** Numerical Analysis of Shallow Tunnels under Static Loading: A Finite Element Approach; *Geotech Geol Eng* (2021). <https://doi.org/10.1007/s10706-020-01647-1>
6. Dhamne, R. R., **Mishra, S., Kumar, A., & Rao, K. S.** Deformation Behavior of D-Shaped Shallow Tunnels under Dynamic Loading Conditions. *Structures*, Vol. 33, (2021). <https://doi.org/10.1016/j.istruc.2021.06.097>
7. **Mishra, S., Zaid, M., Rao, K. S., & Gupta, N. K.** FEA of Urban Rock Tunnels Under Impact Loading at Targeted Velocity. *Geotech Geol Eng* (2021). <https://doi.org/10.1007/s10706-021-01987-6>
8. Imteyaz, W., & **Mishra, S.** (2023). Stability analysis of the Shallow Tunnel Under Soft Ground Regime. *Materials Today: Proceedings*. <https://doi.org/10.1016/j.matpr.2023.03.218>
9. Chawla, S., Pasupuleti, S., Sarkar, K., **Mishra, S.,** and Rahul, A. (2023). A Geotechnical Approach to Compare Different Slope Stabilization Techniques for Failed Slope in the Darjeeling Hills, India. DOI: [10.1007/s12665-023-11054-3](https://doi.org/10.1007/s12665-023-11054-3) *Environmental Earth Sciences* (2023)
10. Srivastav, S., Chawla, S. & **Mishra, S.** (2024). Numerical analysis of moving train induced vibrations on tunnel, surrounding ground and structure. *Earthq. Eng. Eng. Vib.* **23**, 179–192 (2024). <https://doi.org/10.1007/s11803-024-2223-2>
11. Yadav, A. K., **Mishra, S.** & Mishra, D.P. (2024). A detailed review study on utilization of mine and industrial wastes for backfill strengthening. *Arab J Geosci* **17**, 121 (2024). <https://doi.org/10.1007/s12517-024-11917-4>
12. **Mishra, S., Mishra, A., Rao, K.S. et al.** (2024). Factors Affecting Crack Length of a Shallow Tunnel under Surface Impact Load. *Indian Geotech J* (2024). <https://doi.org/10.1007/s40098-024-01018-0>

JOURNAL PAPERS (SUBMITTED)

1. **Mishra, S., Rao, K. S. and Gupta, N. K.** (2025); “Development of Impact Testing Facility (ITF) for Underground Structures”. *Geotechnical Testing Journal* (**Communicated**).
2. **Mishra, S., Rao, K. S. and Gupta, N. K.** (2025); Effect of Impact and Blast Load on Shallow Tunnels; *Rock Mechanics and Rock Engineering* (**Communicated**).

CONFERENCE PAPERS

1. Rao K. S., **Mishra, S.,** and Gupta N. K. (2015); *Fracture Propagation of Rock under Dynamic Regime*; 50th International conference, Engineering Geology New Millennium (EGNM), Special publication of Journal of Engineering Geology- A Bi-annual Journal of ISEG, pp 345-358, ISSN: 0970 – 5317, Delhi.
2. Rao K. S., Sarmah, R. and **Mishra, S.** (2015); *Effect of Projectile Penetration on Shallow*

- Tunnels*; 50th Indian Geotechnical Conference, Pune.
3. Rao K. S., **Mishra, S.**, and Gupta N. K. (2016); *Behavior of Underground Structures in Soft Rocks under Different Strain Rate and Litho-Static Pressure*, 2nd International conference on rock dynamics, “Rocdyn: From Research to Engineering”, Suzhou, China. Taylor and Francis Group, London, ISBN 978-1-138- 02953-8.
 4. . Rao K. S., **Mishra, S.**, and Gupta N. K. (2016); *Effect of Different Loading Conditions on Tunnel Lining in Soft Rocks*; ISRM International Symposium “EUROCK 2016”, Cappadocia, Turkey. Taylor and Francis Group, London, ISBN 978-1-138-03265-1
 5. Chala, E. T., Rao, K. S., **Mishra, S.**, and Kumar, A. (2016); *Geo-mechanical properties of volcanic rocks from Deccan Traps, India*; “VII Brazilian Symposium on Rock Mechanics – SBMR Rock Mechanics and Rock Engineering for Innovation and Development” ISRM specialized conference, Belo Horizonte, Brazil (2016). DOI: 10.20906/CPS/SBMR-02-0005.
 6. Gahoi, A., Zaid, M., **Mishra, S.**, and Rao, K. S. (2017); *Numerical Analysis of Tunnels Subjected To Impact Loads*; 7th Indian Rock Conference, Delhi. ISBN 81-86501-25-1, pg. 434-441.
 7. **Mishra, S.**, Abhijith, C., Singh, A., Kumar, A., Rao, K. S., and Gupta, N. K. (2017); *Parametric Study of Lined and Unlined Tunnels at Shallow Depths under Coupled Static and Cyclic Loading Condition*; Tunneling in Himalayan Geology, Vol:340, Jammu, India.
 8. Kumar, A., Singh, A., **Mishra, S.**, and Rao, K. S. (2017); *Importance of Strength Anisotropy in Numerical Analysis*; Tunneling in Himalayan Geology, Vol: 340, Jammu, India.
 9. Sharma, H., **Mishra, S.**, Rao, K. S., and Gupta, N. K. (2018); *Effect of Cover Depth on Deformation in Tunnel Lining when subjected to Impact Load*; ISRM 10th Asian Rock Mechanics Symposium, (ARMS 10); Suntec City, Singapore (2018).
 10. Zaid, M., **Mishra, S.**, and Rao, K. S. (2019); *Stability of Different Shapes of Himalayan Tunnels Under Blast Loading*; 8th Indian Rock Conference (INDOROCK), Delhi. ISBN 81-86501-27-1, 375-380, ISRM TT.
 11. **Mishra, S.**, Rao, K. S., and Gupta, N. K. (2019); *Static and Dynamic Response of Tunnels under Different Loading Conditions*; 9th Asian Young Geotechnical Engineers Conference (9AYGEC) and 15th International Conference on Geotechnical Engineering (15ICGE), ISSMGE, Lahore, Pakistan.
 12. Zaid, M., **Mishra, S.**, and Rao, K. S. (2020); *Finite Element Analysis of Static Loading on Urban Tunnels*; Indian Geotechnical Conference (IGC), Bangalore, India. DOI: [10.1007/978-981-15-6086-6_64](https://doi.org/10.1007/978-981-15-6086-6_64) Geotechnical Characterization and Modelling. Publisher: Springer
 13. Sinha, S., **Mishra, S.**, Rao, K. S., and Chakraborty, T. (2021); *Analysis of Twin Circular Tunnels Subjected to Impact Loads*, Indian Geotechnical Conference (IGC), Surat, India. Lecture Notes in Civil Engineering Vol.137 DOI: [10.1007/978-981-33-6466-0_63](https://doi.org/10.1007/978-981-33-6466-0_63) Publisher: Springer.
 14. **Mishra, S.**, Dhamne, R., Rao, K. S., and Gupta, N. K. (2021); *Analysis of Urban Tunnels under Different Loading Conditions*; 7th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics (7ICRAGEE) Bangalore India. DOI: [10.1007/978-981-33-4005-3_29](https://doi.org/10.1007/978-981-33-4005-3_29), Seismic Design and Performance, Edition: 1, Chapter: Lecture Notes in Civil Engineering, Volume: 120; Publisher: Springer, Singapore
 15. **Mishra, S.**, and Mishra, A. (2022); *Comparison of Consolidation Settlement Obtained Using Varying Models*. Geo-Congress 2022 Charlotte, North Carolina <https://doi.org/10.1061/9780784484012.044>
 16. Imteyaz, W. and **Mishra, S.** (2023); *Failure of the tunnels across of the world: Case Studies*. Athens, May 12-18, 2023 Taylor and Francis Group, CRC Press London

<https://doi.org/10.1201/9781003348030>

17. Imteyaz, W. and **Mishra, S. (2023)**; *Numerical Analysis of Underground Tunnel under Different Ground Conditions*, **Indian Geotechnical Conference (IGC)**, IIT Roorkee.
18. Dhamne, R., **Mishra, S.**, and Rao, K. S. (2023) *Assessing Tunnel Structural Response to Impulsive Loads*, **Indian Geotechnical Conference (IGC)**, IIT Roorkee.
19. **Mishra, S.**, Kumar, A., Rao, K.S., Gupta, N.K. (2024). *An Experimental Approach to Analyze the Effect of Impact Loading on Shallow Tunnels in Weak Rockmass*. In: Velmurugan, R., Balaganesan, G., Kakur, N., Kanny, K. (eds) *Dynamic Behavior of Soft and Hard Materials Volume 1. IMPLAST 2022*. Springer Proceedings in Materials, vol 34. Springer, Singapore. https://doi.org/10.1007/978-981-99-6030-9_19
20. Kumar, A., **Mishra, S.**, Rao, K.S. (2024). *Brittle–Ductile Transition of Oil Shale*. In: Jose, B.T., Sahoo, D.K., Oommen, T., Muthukkumaran, K., Chandrakaran, S., Santhosh Kumar, T.G. (eds) *Proceedings of the Indian Geotechnical Conference 2022 Volume 5. IGC 2022. Lecture Notes in Civil Engineering*, vol 483. Springer, Singapore. https://doi.org/10.1007/978-981-97-3389-7_10
21. Paul, R. and **Mishra, S. (2024)** *Securing Tunnels – Navigating the Interplay of Blast Loads and Seismic Effects in Global Infrastructure*, **13th Asian Rock Mechanics Symposium (13 ARMS) ISRM**, New Delhi.
22. Dwivedi, A., Akashdeep, Paul, R. and **Mishra, S. (2024)** *Discrete Element Modeling of Dump Slope Stability in Complex Geology*, **13th Asian Rock Mechanics Symposium (13 ARMS) ISRM**, New Delhi.