

Publication Details

Journal Publications:

1. Choudhary, N.S., Goel, M.D. and **Panchal, S.**, 2021. Numerical Analysis of Innovative Sacrificial Protection System under Blast Loading. *Practice Periodical on Structural Design and Construction*, p.04021075. [https://doi.org/10.1061/\(ASCE\)SC.1943-5576.0000655](https://doi.org/10.1061/(ASCE)SC.1943-5576.0000655) (Scopus)
2. Goel, M.D., Verma, S., Mandal, J. and **Panchal, S.**, 2021. Effect of blast inside tunnel on surrounding soil mass, tunnel lining, and superstructure for varying shapes of tunnels. *Underground Space*. <https://doi.org/10.1016/j.undsp.2021.01.003> (Scopus/SCIE)
3. Goel, M.D., Verma, S. and Panchal, S., 2021. Effect of Internal Blast on Tunnel Lining and Surrounding Soil. *Indian Geotechnical Journal*, 51(2), p.359-368. <https://doi.org/10.1007/s40098-020-00451-1> (Scopus/ESCI)
4. Goel, M. D., Choudhary, N. S., & **Panchal, S.**, 2020. Resilient sacrificial protection system for concrete slab under blast loading. *Indian Concrete Journal*, 94(10), p. 1-13 https://www.icjonline.com/editionabstract_detail/102020 (Scopus)
5. **Panchal, S.**, Deb, D. and Sreenivas, T., 2018. Mill tailings based composites as paste backfill in mines of U-bearing dolomitic limestone ore. *Journal of Rock Mechanics and Geotechnical Engineering*, 10(2), pp.310-322. <https://doi.org/10.1016/j.jrmge.2017.08.004> (Scopus/SCIE)
6. **Panchal, S.**, Deb, D. and Sreenivas, T., 2018. Variability in rheology of cemented paste backfill with hydration age, binder and superplasticizer dosages. *Advanced Powder Technology*, 29(9), pp.2211-2220. <https://doi.org/10.1016/j.apt.2018.06.005> (Scopus/SCIE)
7. Deb, D., Sreenivas, T., Dey, G.K. and **Panchal, S.**, 2017. Paste backfill technology: essential characteristics and assessment of its application for mill rejects of uranium ores. *Transactions of the Indian Institute of Metals*, 70(2), pp.487-495. <https://doi.org/10.1007/s12666-016-0999-0> (Scopus/SCIE)
8. B. Mahanta, V. Vishal, **N. N. Sirdesai**, P. G. Ranjith, T. N. Singh, Progressive deformation and pore network attributes of sandstone at in-situ stress states using computed tomography, **2021**, *Engineering Fracture Mechanics*, 252-107833, ISSN: 0013-7944. [10.1016/j.engfracmech.2021.107833](https://doi.org/10.1016/j.engfracmech.2021.107833) (Scopus, SCI)
9. **N. N. Sirdesai**, Alok Singh, L. K. Sharma, Rajesh Singh, T. N. Singh, Determination of thermal damage in rock specimen using intelligent techniques, **2018**, *Engineering Geology*, 239, pp. 179-194, ISSN: 0013-7952. [10.1016/j.enggeo.2018.03.027](https://doi.org/10.1016/j.enggeo.2018.03.027) (Scopus, SCI)
10. **N. N. Sirdesai**, Tushar Gupta, T. N. Singh, P. G. Ranjith, Studying the acoustic emission response of an Indian monumental sandstone under varying temperatures and strains, **2018**, *Construction and Building Materials*, 168, pp. 346-361. ISSN: 0950-0618. [10.1016/j.conbuildmat.2018.02.180](https://doi.org/10.1016/j.conbuildmat.2018.02.180) (Scopus, SCI)
11. L. K. Sharma, **N. N. Sirdesai**, K. M. Sharma, T. N. Singh, Experimental study to examine the independent roles of lime and cement on the stabilization of a mountain soil: A comparative study, **2018**, *Applied Clay Science*, 152, pp.183-195, ISSN: 0169-1317. [10.1016/j.clay.2017.11.012](https://doi.org/10.1016/j.clay.2017.11.012) (Scopus, SCI)
12. **N. N. Sirdesai**, Alok Singh, L. K. Sharma, Rajesh Singh, T. N. Singh, Development of novel methods to predict the strength properties of thermally treated sandstone using statistical and soft-computing approach. **2017**, *Neural Computing and Applications*, 31(7), pp. 2841-2867, ISSN: 0941-0643. [10.1007/s00521-017-3233-z](https://doi.org/10.1007/s00521-017-3233-z) (Scopus, SCI)

13. **N. N. Sirdesai**, B. Mahanta, P. G. Ranjith, T. N. Singh Effects of thermal treatment on physico-morphological properties of Indian fine-grained sandstone, **2017**, *Bulletin of Engineering Geology and the Environment*, 78(2), pp. 883-897, ISSN: 1435-9529. [10.1007/s10064-017-1149-6](https://doi.org/10.1007/s10064-017-1149-6) (Scopus, SCI)
14. **N. N. Sirdesai**, T. N. Singh, P. G. Ranjith Thermal alterations in the poro-mechanical characteristic of an Indian sandstone – A comparative study, **2017**, *Engineering Geology*, 226, pp. 208-220, ISSN: 0013-7952. [10.1016/j.enggeo.2017.06.010](https://doi.org/10.1016/j.enggeo.2017.06.010) (Scopus, SCI)
15. B. Mahanta, **N. N. Sirdesai**, T. N. Singh, P. G. Ranjith Experimental Study of Strain Rate Sensitivity to Fracture Toughness of Rock using Flattened Brazilian Disc, **2017**, *Procedia Engineering*, ISSN: 1877-7058. [10.1016/j.proeng.2017.05.179](https://doi.org/10.1016/j.proeng.2017.05.179) (Scopus Conference)
16. **N. N. Sirdesai**, T. N. Singh, P. G. Ranjith, R. Singh Effect of Varied Durations of Thermal Treatment on the Tensile Strength of Red Sandstone, **2017**, *Rock Mechanics and Rock Engineering*, 50(1), pp. 205-213, ISSN: 0723-2632. [10.1007/s00603-016-1047-4](https://doi.org/10.1007/s00603-016-1047-4) (Scopus, SCI)
17. **N. N. Sirdesai**, Rajesh Singh, T. N. Singh, and Ranjith P. G. Numerical and experimental study of strata behaviour and land subsidence in an underground coal gasification project, **2015**, *Proceedings of the International Association of Hydrological Sciences (PIAHS)*, 372, pp. 455-462, ISSN: 2199-8981. [10.5194/piahs-372-455-2015](https://doi.org/10.5194/piahs-372-455-2015) (Scopus Conference)
18. M.D. Goel., S. Verma, S. Panchal, **N. N. Sirdesai**, **2020**, Effect of Material Models on Dynamic Behavior of Reinforced Concrete Slabs Exposed to Blast Loading, *International Conference Advances in Civil Engineering (ACE 2020)*, Nagpur, India, 5-7 November 2020. (LINK TO BE PUBLISHED)
19. **N. N. Sirdesai**, Abil Aravind, S. Panchal, **2020**, Impact of rock abrasivity on TBM cutter disks during tunneling in various rock formations, *International Conference on Advances in Mechanical Engineering (ICAME-2020)*, Nagpur, India, 10-11 January 2020. https://doi.org/10.1007/978-981-15-3639-7_63
20. **N. N. Sirdesai**, Abil Aravind, Alok Singh, **2019**, Correlation of Abrasivity and Physico-mechanical properties of rocks: An Experimental, Statistical and Soft-computing analysis, *The 5th ISRM Young Scholars' Symposium on Rock Mechanics (YSRM 2019) & International Symposium on Rock Engineering for Innovative Future (REIF 2019)*, Okinawa, Japan, 1-4 December 2019. <https://onepetro.org/ISRMYSS/proceedings/YSRM19/All-YSRM19/ISRM-YSRM-2019-028/448767>
21. K. M. Sharma, **N. N. Sirdesai**, A. Tripathy, T. N. Singh, **2018**, Micro-Pores and Fluid Flow-A Numerical Study. *52nd U.S. Rock Mechanics/Geomechanics Symposium (ARMA 2018)*, Seattle, Washington, 17-20 June 2018. <https://onepetro.org/ARMAUSRMS/proceedings-abstract/ARMA18/All-ARMA18/ARMA-2018-933/122647>
22. **N. N. Sirdesai**, V. Srinivasan, R. Singh and T. N. Singh, **2018**, Thermo-Temporal behaviour of uniaxial compressive strength of a fine-grained Indian sandstone, *EUROCK 2018*, St. Petersburg, Russia, 22-26 May 2018. <https://onepetro.org/ISRMEUROCK/proceedings-abstract/EUROCK18/All-EUROCK18/ISRM-EUROCK-2018-092/446971>
23. Tripathy, V. Srinivasan, K. K. Maurya, **N. N. Sirdesai** and T. N. Singh, **2018**, Acoustic and failure behaviour of Gondwana shale under uniaxial compressive and indirect Brazilian tensile loading - an experimental study, *EUROCK 2018*, St. Petersburg, Russia, 22-26 May 2018. <https://onepetro.org/ISRMEUROCK/proceedings-abstract/EUROCK18/All-EUROCK18/ISRM-EUROCK-2018-093/447007>
24. B. Mahanta, **N. N. Sirdesai**, T. N. Singh, P. G. Ranjith Experimental Study of Strain Rate Sensitivity to Fracture Toughness of Rock using Flattened Brazilian Disc, **2017**, *Procedia Engineering*, ISSN: 1877-7058. *ISRM European Rock Mechanics Symposium - EUROCK 2017*, Ostrava, Czech Republic, June 2017 [10.1016/j.proeng.2017.05.179](https://doi.org/10.1016/j.proeng.2017.05.179) (Scopus Conference)

25. Ratan Das, **N. N. Sirdesai**, T. N. Singh, **2017**, Analysis of Deformational Behaviour of Circular Underground Opening in Soft Ground Using Three-Dimensional Physical Model, *51st U.S. Rock Mechanics Symposium (ARMA-2017)*, San Francisco, USA, 25-28 June 2017. <https://onepetro.org/ARMAUSRMS/proceedings-abstract/ARMA17/All-ARMA17/ARMA-2017-0172/124188>
26. **N. N. Sirdesai**, Bankim Mahanta, Ranjith PG and TN Singh, **2016**, Elastic Modulus of Thermally Treated Fine Grained Sandstone using non-contact Laser Extensometer, *Recent Advances in Rock Engineering (RARE 2016)*, Bengaluru, India, 16-18 November 2016. <https://www.atlantispress.com/article/25864862.pdf>
27. **N. N. Sirdesai**, Rajesh Singh, T. N. Singh, and Ranjith P. G. Numerical and experimental study of strata behaviour and land subsidence in an underground coal gasification project, **2015**, *Proceedings of the International Association of Hydrological Sciences (PIAHS)*, 372, pp. 455-462, ISSN: 2199-8981. *Ninth International Symposium on Land Subsidence (NISOLS 2015)*, Nagoya, Japan, 15-19 November 2015. [10.5194/piahs-372-455-2015](https://doi.org/10.5194/piahs-372-455-2015) (Scopus Conference)
28. **Lokhande R D**, Murthy V M S R and Singh K B “Semi-empirical model for predicting pot-hole depth in underground coal mining” **Current Science**, Vol. 115, No.09, pp. 1761-1769, 2018. ISSN 0011-3891 DOI:10.18520/cs/v115/i9/1761-1769
29. Jena S. K., **Lokhande R. D.**, Pradhan M. and Kumar N “Development of a model to estimate strata behavior during bord and pillar extraction in underground coal mining” **Arabian Journal of Geosciences (Springer)**, 12: 242, PP – 3-15 /242, 2019. ISSN: 1866-7511 (print version) ISSN: 1866-7538 (electronic version) DOI:10.1007/s12517-019-4381-5
30. **Lokhande R D**, Murthy V M S R, Singh K B, Verma C P & Verma A K “Numerical Modeling of Pot-hole Subsidence Due to Shallow Underground Coal Mining in Structurally Disturbed Ground”. **Journal of Institution of Engineers (India)-Series D (Springer)**, Vol. 99, No. 1, pp. 93–101, 2018.ISSN: 2250-2122 (print version) ISSN: 2250-2130 (electronic version) <https://doi.org/10.1007/s40033-017-0148-x>
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33. Chimmani K. V. & **Lokhande R. D** “Study the Behaviour of Underground Oil Cavern Under Static Loading Condition”, **Journal of Geotechnical and Geological**, 2021. (Online access) ISSN:0960-3182(print version)ISSN: 1573-1529 (electronic version) <https://doi.org/10.1007/s10706-021-01939-0>
34. Somu S Krishna & **Lokhande R. D.**“Study on the Effect of Surface Subsidence Due to Tunneling Under Various Loading Conditions”, **Journal of Geotechnical and Geological**, 2021. (Online access) ISSN:0960-3182(print version)ISSN: 1573-1529 (electronic version) DOI:10.1007/s10706-021-01936-3
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38. Mandal J, **Agarwal, A. K.**, & Goel M. D., Numerical Modeling of Shallow Buried Tunnel Subject to Surface Blast Loading, *Journal of Performance of Constructed Facilities (ASCE)*, Volume 34 Issue 6 - December 2020, [https://doi.org/10.1061/\(ASCE\)CF.1943-5509.0001518](https://doi.org/10.1061/(ASCE)CF.1943-5509.0001518), (ISSN / eISSN: 0887-3828 / 1943-5509), (SCI-E) <https://ascelibrary.org/doi/10.1061/%28ASCE%29CF.1943-5509.0001518>
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47. Mandal, J., Goel, M.D., **Agarwal, A.K.**, Underground Structures Subjected to Various Blast Loading Scenarios: A Scoping Review, *Archives of Computational Methods in Engineering*, 2021, ISSN: 1134-3060 (Print), 1886-1784 (Web), (Scopus). Accepted <https://link.springer.com/article/10.1007/s11831-021-09664-w>

48. ANUPAM A. KHER RAJENDRA R YERPUDE, Application and Comparative Assessment of Data Mining and Time Series Forecasting Models to Indian Coal Mining Production and Employment Parameters - **The International Journal of Next-Generation Computing (IJNGC)** special Issue, Vol. 12, No. 5, November 2021. <https://ijngc.perpetualinnovation.net/index.php/ijngc/article/view/472/227>
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55. Ishwardas L Muthreja, Liladhar Dhote Aniruddha Ghare and Rajendra Yerpude ; "Estimation of Critical Velocity and Pressure Gradient for Sand Slurry and OBM Slurry using Artificial Neural Network"; Accepted for publication, Mining Engineering published by SME, USA (Scopus)
56. Shashank Sharma, I. L. Muthreja, R. R. Yerpude;(2020) "Application and comparison of squeezing estimation methods for Himalayan tunnels"; Bulletin of Engineering Geology and the Environment; July 2019; <https://doi.org/10.1007/s10064-019-01530-1> (Jan 2020)
57. M. D. Goel, Krishna Prasad Kallada, I. L. Muthreja (2020). An Abridged Review of Empirical Formulae for Computation of Penetration, Scabbing and Perforation Depth Under Projectile Impact, Archives of Computational Methods in Engineering , Impact Factor (2019) = 6.730.
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International Conference Publications:

1. M.D. Goel., S. Verma, **S. Panchal**, N. N. Sirdesai, **2020**, Effect of Material Models on Dynamic Behavior of Reinforced Concrete Slabs Exposed to Blast Loading, *International Conference Advances in Civil Engineering (ACE 2020)*, Nagpur, India, 5-7 November 2020. (LINK TO BE PUBLISHED)
2. N. N. Sirdesai, Abil Aravind, **S. Panchal**, **2020**, Impact of rock abrasivity on TBM cutter disks during tunneling in various rock formations, *International Conference on Advances in Mechanical Engineering (ICAME-2020)*, Nagpur, India, 10-11 January 2020. https://doi.org/10.1007/978-981-15-3639-7_63
3. **Panchal, S.** and Deb, D., **2018**, October. Composite Cemented Backfill Based on Fly Ash, Bottom Ash and Mill Tailings. In *ISRM International Symposium-10th Asian Rock Mechanics Symposium. ARMS10*, Singapore, October 2018. <https://onepetro.org/ISRMARMS/proceedings/ARMS1018/All-ARMS1018/ISRM-ARMS10-2018-184/43360>
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9. **N. N. Sirdesai**, V. Srinivasan, R. Singh and T. N. Singh, **2018**, Thermo-Temporal behaviour of uniaxial compressive strength of a fine-grained Indian sandstone, *EUROCK 2018*, St. Petersburg, Russia, 22-26 May 2018. <https://onepetro.org/ISRMEUROCK/proceedings-abstract/EUROCK18/All-EUROCK18/ISRM-EUROCK-2018-092/446971>

10. Tripathy, V. Srinivasan, K. K. Maurya, **N. N. Sirdesai** and T. N. Singh, **2018**, Acoustic and failure behaviour of Gondwana shale under uniaxial compressive and indirect Brazilian tensile loading - an experimental study, EUROCK 2018, St. Petersburg, Russia, 22-26 May 2018. <https://onepetro.org/ISRMEUROCK/proceedings-abstract/EUROCK18/All-EUROCK18/ISRM-EUROCK-2018-093/447007>
11. B. Mahanta, **N. N. Sirdesai**, T. N. Singh, P. G. Ranjith Experimental Study of Strain Rate Sensitivity to Fracture Toughness of Rock using Flattened Brazilian Disc, **2017**, *Procedia Engineering*, ISSN: 1877-7058. *ISRM European Rock Mechanics Symposium - EUROCK 2017*, Ostrava, Czech Republic, June 2017 [10.1016/j.proeng.2017.05.179](https://doi.org/10.1016/j.proeng.2017.05.179) (**Scopus Conference**)
12. Ratan Das, **N. N. Sirdesai**, T. N. Singh, **2017**, Analysis of Deformational Behaviour of Circular Underground Opening in Soft Ground Using Three-Dimensional Physical Model, *51st U.S. Rock Mechanics Symposium (ARMA-2017)*, San Francisco, USA, 25-28 June 2017. <https://onepetro.org/ARMAUSRMS/proceedings-abstract/ARMA17/All-ARMA17/ARMA-2017-0172/124188>
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