

Updated as on 6th January 2025**Summary of Publications**

PUBLICATIONS	Number
Publications in National Journals	14
Publications in International Journals	18
Publications in International Conferences	12
Publications in National Conferences	19
Publication of S&T (R&D) Report	01
Contribution of Chapter in International Books	02
GRAND TOTAL	66

Publications in National Journals

1. Bellapu HVS, Sinha RK, Naik SR (2023) "Estimation of Modulus of Deformation by Different Methods for an Underground Cavern—A Case Study." Indian Geotechnical Journal 53 (3), 644-650
2. S Samanta, RK Sinha, PB Chakrabarty, H Kumar (2022) "Deployment of Continuous Miner in under Ground Coal Mine: A Case Study of Sarpi Mine." Journal of The Institution of Engineers (India): Series D 103 (2), 453-471
3. S Samanta, RK Sinha, PB Chakrabarty, H Kumar (2022) "A Numerical Modelling Approach for Finding the Stability of Snook during Depillaring: A Case Study of Jhanjra Mine." Journal of The Institution of Engineers (India): Series D 103 (1), 1-11
4. S Samanta, RK Sinha, PB Chakrabarty, H Kumar (2022) "A Numerical Modelling Approach to Find the Stability of RIB and Snook in Mechanised Depillaring Panel—A Case Study of Kurja Mine." Journal of Mines, Metals and Fuels 70 (4), 191-202
5. R Bilash Prajapati, R Kumar Sinha, RN Gupta, S Kumar, D Prajapati (2022) "Artificial Intelligence Model for Prediction of Local and Main FALL in caving Panel of Bord and Pillar Method of Mining." Journal of Mines, Metals & Fuels 70 (4)
6. S Samanta, RK Sinha, PB Chakrabarty, H Kumar (2022) "Amelioration of production and safety in bord and pillar work through the deployment of continuous miner technology." Journal of Mines, Metals & Fuels 70 (2)
7. RB Prajapati, RK Sinha, RN Gupta, S Kumar (2022) "The prediction of caving sequence in bord and pillar workings using Random Forest algorithm." Journal of Mines, Metals & Fuels 70 (2)
8. SS Prasad, RK Sinha, K Sudheer (2021) "Application of continuous miner technology for extraction of deep seated coal seam under hard roof conditions-a case study of Churcha mine." Journal of Mines, Metals & Fuels 69 (12)
9. SS Prasad, RK Sinha, B Rambabu (2021) "Numerical modelling approach for assessment of factor of safety of ribs in continuous miner depillaring panels-a case study of Churcha mine." Journal of Mines, Metals & Fuels 69 (11)
10. Verma, A. K., Rabindra Kumar Sinha, S. Sardana, M. Jaswal, and T. N. Singh. (2021). "Investigation into the Rockfall Hazard along Lengpui-Aizawl Highway, NH-44A, Mizoram, India." Indian Geotechnical Journal 50(6).
11. Subrahmanyam, D. S., Sinha, R. K., & Shyam, G. (2015). Deformability and shear strength properties of rock mass in shear zone area and their impact on the design of major

- underground structures in hydroelectric projects. *Journal Indian Geological Congress*, 7(2), 17–22.
12. Sengupta, S., Subrahmanyam, D. S., & Sinha, R. K. (2014). State of ground stress its use and measurement in rock engineering with special reference to weak rocks. *ISRM (India) Journal*, 2(1), 16–24.
 13. Sinha, R. K., Jawed, M., & Sengupta, S. (2013). Influence of anisotropic stress conditions on design of development workings in bord and pillar mining. *ISRM (India) Journal*, 2(1), 16–24. India.
 14. Sinha, R. K., Sengupta, S., Subrahmanyam, D. S., & Joseph, D. (2007). Verification of stress concentration and displacement around a circular tunnel using a 3D boundary element program EXAMINE3D. *MineTECH'07, The Indian Mining & Engineering Journal*, 85–89. India.

Publications in International Journals

1. Kumar S, Sinha RK, Jawed M (2023) “Numerical simulation of depillaring panel at higher depth-Jamadoba mine case study.” *Ain Shams Engineering Journal* 14 (4), 101939
2. S Sardana, RK Sinha, AK Verma, M Jaswal, TN Singh (2022) “A Semi-Empirical Approach for Rockfall Prediction Along the Lengpui-Aizawl Highway Mizoram, India.” *Geotechnical and Geological Engineering* 40 (11), 5507-5525
3. S Sardana, RK Sinha, AK Verma, TN Singh (2022) “Investigations into the freeze–thaw-induced alteration in microstructure and deteriorative responses of physico-mechanical properties of Himalayan rock.” *Bulletin of Engineering Geology and the Environment* 81 (7), 269
4. S Sardana, RK Sinha, AK Verma, M Jaswal, TN Singh (2022) “Influence of freeze–thaw on the stability of road cut slopes—a case study in the Indian Himalayan region.” *Canadian Geotechnical Journal* 60 (1), 107-112
5. Rajpurohit, S.S., R.K. Sinha, P. Sen, and V. Adak. (2020). “Effect of the Rock Properties on Sawability of Granite Using Diamond Wire Saw in Natural Stone Quarries.” *Arabian Journal of Geosciences* 13(21).
6. Jaswal, M., R.K. Sinha, and P. Sen. (2020). “Delineation of Phreatic Surface in Soil Type Slope—A Comparative Study Using Physical and Numerical Modeling.” *Journal of Mining Science* 56(3).
7. Biswas, P., Sinha, R. K., Sen, P., & Rajpurohit, S. S. (2020). Determination of optimum cut-off grade of an open-pit metalliferous deposit under various limiting conditions using a linearly advancing algorithm derived from dynamic programming. *Resources Policy*, 66(January), 101594. <https://doi.org/10.1016/j.resourpol.2020.101594>
8. Kumar, S., Mishra, A. K., Choudhary, B. S., Sinha, R. K., Deepak, D., & Agrawal, H. (2020). Prediction of Ground Vibration Induced Due to Single Hole Blast Using Explicit Dynamics. *Mining, Metallurgy and Exploration*, 37(2). <https://doi.org/10.1007/s42461-019-00162-z>
9. Murlidhar, Bhatawdekar Ramesh et al. 2020. “The Effects of Particle Swarm Optimisation and Genetic Algorithm on ANN Results in Predicting Pile Bearing Capacity.” *International Journal of Hydromechatronics* 3(1): 69–87.
10. Sinha, R. K., Jawed, M., & Sengupta, S. (2019). An approach for support design in depillaring panels of coal mines. *Arabian Journal of Geosciences*, 12(21). <https://doi.org/10.1007/s12517-019-4858-2>
11. Das, A. J., Mandal, P. K., Paul, P. S., & Sinha, R. K. (2019). Generalised Analytical Models for the Strength of the Inclined as well as the Flat Coal Pillars using Rock Mass Failure Criterion. *Rock Mechanics and Rock Engineering*, 52(10), 3921–3946. <https://doi.org/10.1007/s00603-019-01788-7>
12. Das, A. J., Mandal, P. K., Paul, P. S., Sinha, R. K., & Tewari, S. (2019). Assessment of the Strength of Inclined Coal Pillars through Numerical Modelling based on the Ubiquitous Joint

Model. Rock Mechanics and Rock Engineering, (0123456789).
<https://doi.org/10.1007/s00603-019-01826-4>

13. Rajpurohit, S. S., & Sinha, R. K. (2018). Influence of physico-mechanical properties of Indian dimension stones on cutting rate of diamond wire saw. *Arabian Journal of Geosciences* (2018), 11(564), 2-10–564.
14. Jawed, M., & Sinha, R. K. (2018). Design of rhombus coal pillars and support for Roadway Stability and mechanizing loading of face coal using SDLs in a steeply inclined thin coal seam — a technical feasibility study. *Arabian Journal of Geosciences*, 11(415), 7-14–415.
15. Sinha, R. K., Jawed, M., & Sengupta, S. (2015). Design of support system in depillaring panel using numerical modelling – A case study. *International Journal of Earth Sciences and Engineering*, 08(06), 2678–2686.
16. Sinha, R. K., Jawed, M., & Sengupta, S. (2015). Influence of rock mass rating and in situ stress on stability of roof rock in bord and pillar development panels. *International Journal of Mining and Mineral Engineering*, 6(3), 258–275. doi:10.1504/IJMME.2015.071175. Switzerland.
17. Jawed, M., Sinha, R. K., & Sengupta, S. (2013). Chronological development in coal pillar design for bord and pillar workings: A critical appraisal. *Journal of Geology and Mining Research*, 5(1), 1–11. doi:10.5897/JGMR12.010. Nigeria.
18. Sengupta, S., & Sinha, R. K. (2011). Investigation into the causes of severe roof problems in some Indian coal mines and formulation of guidelines to reduce ground control problems. *International Journal of Mining and Mineral Engineering*, 3(4), 290–302. doi:10.1504/IJMME.2011.045471. Switzerland.

Publications in International Conferences

1. S Sardana, RK Sinha, M Jaswal, AK Verma, TN Singh (2021) “Influence of Freeze-thaw Cycles on the Velocity of Elastic Waves in Saturated Rock Specimens” International Conference on Geotechnical Challenges in Mining, Tunneling and Underground Infrastructures.
2. HV Sekar Bellapu, RK Sinha, SR Naik (2021) “Estimation of Deformation Modulus of Rock Mass for an Underground Cavern Based on Back Analysis.” International Conference on Geotechnical Challenges in Mining, Tunneling and Underground Infrastructures
3. K Sudhakar, RK Sinha, SR Naik (2021) “Safety and Stability Monitoring of Underground Structures-Role of Geotechnical Instruments.” International Conference on Geotechnical Challenges in Mining, Tunneling and Underground Infrastructures.
4. Sardana, S. et al. 2020. “Stability Assessment of a Road Cut Slope Using 3D Numerical Simulation – a Case Study.” In *Rock Mechanics for Natural Resources and Infrastructure Development- Proceedings of the 14th International Congress on Rock Mechanics and Rock Engineering*, ISRM 2019,.
5. Rajpurohit, S. S., Sinha, R. K., & Sen, P. (2020). Influence of Cerchar hardness index of hard rock granite on wear of diamond tools. *Materials Today: Proceedings*,. <https://doi.org/10.1016/j.matpr.2020.03.273>
6. Das, A J et al. 2017. “Effect of the Strata Inclination during Underground Extraction of the Coal Seams.” In *7th Asian Mining Congress*, 8-11 Nov 2017, Kolkata, India, The Mining Geological and Metallurgical Institute of India (MGMI), , 223–38.
7. Subrahmanyam, D. S., Sengupta, S., Sinha, R. K., & Shyam, G. (2013). Determination of in-situ stress at desilting chamber of Punatsangchhu hydroelectric project (Bhutan) to reconfirm its orientation influenced by topography - A case study. *7th International Conference on case histories in Geotechnical Engineering*, Chicago, April 29 - May 4, 2013. Chicago, USA.
8. Sengupta, S., & Sinha, R. K. (2011). Assessment of Impact of Nearby Excavations on the Deformability and Stress Conditions around a Proposed Powerhouse by Field and Numerical Modeling. *ARMA 45th US Rock Mechanics / Geomechanics Symposium*, San Francisco,

- CA, June 26-29 2011. Retrieved from <http://www.onepetro.org/mslib/servlet/onepetropreview?id=ARMA-11-428>
9. Sengupta, S., Subrahmanyam, D. S., Joseph, D., & Sinha, R. K. (2011). Underground LPG facilities, in situ stress considerations in the design of the cavern. ICUST-2011, International Conference on Underground Space Technology and the 8th Asian Regional Conference of IAEG, 17th – 19th January 2011. Bengaluru, India.
 10. Sengupta, S., Sinha, R. K., Subrahmanyam, D. S., & Shyam, G. (2011). Estimation of the stress magnitudes from the measured deformability parameters for the design of a powerhouse – a case study. ICUST-2011, International Conference on Underground Space Technology and the 8th Asian Regional Conference of IAEG, 17th – 19th January 2011. Bengaluru, India.
 11. Sengupta, S., Subrahmanyam, D. S., Joseph, D., & Sinha, R. K. (2010). Design of a hydroelectric project affected by stress perturbation - a case study. ISRM International Symposium 2010 and 6th Asian Rock Mechanics Symposium - Advances in Rock Engineering 23-27 October, 2010, New Delhi, India. Retrieved from <http://www.onepetro.org/mslib/servlet/onepetropreview?id=ISRM-ARMS6-2010-095>
 12. Sengupta, S., Subrahmanyam, D. S., Joseph, D., Sinha, R. K., & Gupta, R. N. (2005). State of stress in the Himalayas and its impact on the design of hydroelectric projects. International Conference on Tunnelling Asia' 2004 Need for Accelerated Underground Construction - Issues and Challenges, 14-17 December 2004, New Delhi, India (Vol. 15). Central Board of Irrigation and Power. Retrieved from <http://www.indianjournals.com/ijor.aspx?target=ijor:wea&volume=15&issue=1&article=036>

Publications in National Conferences

1. Sinha, Rabindra Kumar. (2020). "Application of in Situ Stress in Design of Supports for Depillaring Panels of Underground Coal Mines." In Mining Industry: Challenges & Opportunities – 2020 (MICO'20)Community Hall, Koyla Nagar, Dhanbad, Jharkhand from 10th -11th Jan 2020, Dhanbad, India: IMMA.
2. Sardana, S., Sinha, R. K., Verma, A. K., & Singh, T. N. (2020). Design of rockfall barrier for a road cut slope in hilly region. In National Conference on Advances in Mining (AIM-2020) (pp. 400–404). Dhanbad, India: CSIR CIMFR. <https://doi.org/10.1055/s-2008-1040325>
3. Rajpurohit, S. S., Sinha, R. K., Sen, P., & Chand, C. S. (2020). Mining Of Granites As Dimensional Stone In Andhra Pradesh And Telangana State, India. In Satyendra K Singh (Ed.), National Conference on Advances in Mining (AIM-2020) (Vol. 13, pp. 199–209).
4. Arshad, S., Kumar, H., & Sinha, R. K. (2018). Study on Variation In Geotechnical Properties of Practicing Backfill Material on Addition of Mill Tailing Collected From Tailing Pond. In Proceeding for International Conference on Recycling and Waste Management (ICRWM-19) (pp. 45–48). Varanasi, Uttar Pradesh 45.
5. Sinha, R. K. (2018). Hydraulic fracturing for in situ stress measurement and its application in the design of underground structures in Rock - few case studies. In S. R. Mallick (Ed.), Keynote address in Current Practices in Mining & Allied Industries (CMPAI-2018), Keonjhar, Oct 6-7, 2018. Keonjhar: GEC Keonjhar.
6. Sardana, S., Sinha, R. K., Verma, A. K., & Singh, T. N. (2018). Effect of shape of falling rock block on kinetic energy and fall-out volume. In S. . Singh, S. K. Roy, R. Kumar, & P. K. Singh (Eds.), Technological advancements and emerging mining methods-TAEMM-2018 (pp. 248–251). Dhanbad: CSIR-CIMFR.
7. Jaswal, M., Sinha, R. K., & Sen, P. (2018). Estimating flow through embankment dams for prevention of piping and its subsequent collapse. In S. . Singh, S. K. Roy, R. Kumar, & P. K. Singh (Eds.), Technological advancements and emerging mining methods-TAEMM-2018 (pp. 256–262). Dhanbad: CSIR-CIMFR.
8. Kadiyala, S., Naik, S. R., & Sinha, R. K. (2018). Developments in geotechnical instrumentation and long-term monitoring of large underground caverns. In S. . Singh, S. K.

- Roy, R. Kumar, & P. K. Singh (Eds.), Technological advancements and emerging mining methods-TAEMM-2018 (pp. 219–232). Dhanbad: CSIR-CIMFR.
9. Sen, P., Sinha, R. K., & Kumar, S. (2018). Impact of sand mining on environment and their implication. In P. K. Singh & S. K. Ray (Eds.), Recent Challenges in Mining Industry (RCMI 2018) (pp. 313–318). Dhanbad: Central Institute of Mining and Fuel Research.
 10. Singh, V. K., & Sinha, R. K. (2017). Latest trends in strata control in longwall mining with special reference to strata monitoring techniques. In Technical Workshop on Latest Trends in Strata Control in Longwall Mining with Special Reference To Strata Monitoring Techniques, Directorate General of Mines Safety- Dhanbad, 20-01-2017 (pp. 1–7).
 11. Sinha, R.K. & Pathak, R.K., (2014). Challenges for Applications of Robotics in Mining Engineering. In National Seminar on “Robotics: Applications & Challenges” Sept-15. Ranchi: ICFAI University Ranchi, Jharkhand.
 12. Sinha, R. K., Subrahmanyam, D. S., Shyam, G., & Sengupta, S. (2014). Understanding the mining induced stresses by actual measurement and numerical modeling in a deep lead zinc mine. National Seminar on Innovative Practices in Rock Mechanics (IPRM-2014), The Capitol Hotel, Raj Bhawan Road, Bengaluru, Organised by NIRM.
 13. Shyam, G., Subrahmanyam, D. S., Sinha, R. K., & Immanuel, T. Y. M. (2014). Evaluation of deformability characteristics of rock mass at Pare hydroelectric project for the design of dam foundation. National Seminar on Innovative Practices in Rock Mechanics (IPRM-2014), The Capitol Hotel, Raj Bhawan Road, Bengaluru, Organised by NIRM.
 14. Sinha, R. K., Sengupta, S., Subrahmanyam, D. S., & Joseph, D. (2005). Renewal of mining lease lying in forest area: a critical appraisal of the existing laws in India. Conference on Technological Advancements and Environmental Challenges in Mining and Allied Industries in the 21st Century, 5 - 6 Feb 2005. NIT Rourkela - India.
 15. Sinha, R. K., Sengupta, S., Subrahmanyam, D. S., & Joseph, D. (2007). Review of computational software used for design of structures in rock. Indian Mining Congress on Emerging Trends in Mineral Industry, Organised by Mining Engineer’s Association of India, National Headquarters and Rajasthan Chapter, July 13-15, 2007. Udaipur, India.
 16. Sinha, R. K., Sengupta, S., & Gupta, R. N. (2004). Implementing total productive maintenance (TPM) in mineral industry. ENTMS 2004 - Geomintech Symposium.
 17. Sengupta, S., Subrahmanyam, D. S., Joseph, D., & Sinha, R. K. (2009). Stress perturbations due to presence of an intrusive and numerical simulation to understand the effect - A case study in a metal mine. (S. S. Rathore & S. C. Jain, Eds.) 21st National Convention of Mining Engineers and National Seminar on Technological Advances in Mining Industry, Dec 2009. Udaipur, India: Himanshu Publications, New Delhi.
 18. Mathur, L. N., & Sinha, R. K. (1998). Greening the environment is a corporate responsibility. Workshop on Basic Need for Creating a Clean Safe and Congenial Work Environment, Tamilnadu and Kerala Mines Safety Association, TANKEMSA. Salem, Tamilnadu - India.
 19. Sinha, R. K. (1999). Khan khanij aur khaman. Souvenir, Mines Environmental and Mineral Conservation Council, Tamilnadu Region. Madukkarai - Coimbatore - India.

Publication of S&T Report

1. Sengupta, S., Chakrabarti, S., Gupta, R. N., Subrahmanyam, D. S., Joseph, D., Sinha, R. K., Kar, A., et al. (2004). Measurement of In Situ Stress by Hydrofracture Method and Investigations on Redistribution of In Situ stress due to Local Tectonics and Methods of Workings at Tandsi and Thesgora Mines, WCL to Devise a Suitable Support Plan SSR. NIRM Coal S&T Project Report MT-117, Funded by Ministry of Coal, Government of India.

Contribution of Chapter in International Books

1. P Biswas, RK Sinha, P Sen (2022) “Advanced Analytics for Dynamic Programming.” Advanced Analytics in Mining Engineering: Leverage Advanced Analytics in Mining Industry to Make Better Business Decisions. Pages 307-322, Publisher: Springer International Publishing
2. Sengupta, S., Subrahmanyam, D.S. & Sinha, R.K., 2013. Estimation of the impact of mining on stresses by actual measurements in pre and post mining stages by hydrofracture method - a case study in copper mine. In Effective and Sustainable Hydraulic Fracturing. INTECH, pp. 915–925.