Pedram Roghanchi
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PROFESSIONAL PREPARATION

Amirkabir University of Technology	Tehran, Iran	B.Sc.	2011
University of Nevada, Reno	Reno, NV, Mining Engineering	M.Sc.	2013
University of Nevada, Reno	Reno, NV, Geo-Engineering	Ph.D.	2017

Appointments

2023 – present	Associate Professor, Department of Mining Engineering, Lexington, KY, USA
2018 – 2023	Freeport Mc-Mo-Ran Endowed Assistant Professor, Department of Mineral Engineering, New Mexico Tech, Socorro, NM, USA
2017 – 2018	Research Associate, University of Nevada, Reno, Reno, NV, USA

SELECTED JOURNAL PUBLICATIONS

1. Beeche, C. A., Garcia, M. A., Leng, S., **Roghanchi, P.,** & Pu, J. (2023). *Computational risk modeling of underground coal mines based on NIOSH employment demographics*. Safety science, 164, 106170.
2. Dinelli C., Racette J., Escarcega M., …, **Roghanchi P.,** Hassanalian M., (2023). *Configurations and Applications of Multi-Agent Hybrid Drone-Unmanned Ground Vehicles for Underground Environments: A Review*. Accepted by the Drones Journal.
3. Shekarian Y., Rahimi E., Rezaee M., **Roghanchi P.**, (2023). *A systematic review of occupational exposure to respirable coal mine dust (RCMD) in the U.S.* Accepted by the International Journal of Coal Science and Technology.
4. Rahimi, E., Shekarian, Y., Shekarian, N., & Roghanchi, P. (2023). *Investigation of respirable coal mine dust (RCMD) and respirable crystalline silica (RCS) in the U.S. underground and surface coal mines.* Accepted by Scientific Reports (10.1038/s41598-022-24745-x)
5. Aboelezz, A., Wetz, D., Lehr, J., **Roghanchi, P.**, & Hassanalian, M. (2023). *Intrinsically Safe Drone Propulsion System for Underground Coal Mining Applications: Computational and Experimental Studies*. Drones, 7(1), 44.
6. Salinas, V., Das, M., Jacquez, Q., Camacho, A., Zychowski, K., Hovingh, M., ... & **Roghanchi, P.** (2022). *Characterization and Toxicity Analysis of Lab-Created Respirable Coal Mine Dust from the Appalachians and Rocky Mountains Regions.* Minerals, 12(7), 898.
7. Shahmoradi, J., **Roghanchi, P.**, & Hassanalian, M. (2022). *Design, analysis and prototyping of a spherical drone for underground mines.* International Journal of Theoretical and Applied Multiscale Mechanics, 4(1), 58-82.
8. Rahimi, E., Shekarian, Y., Shekarian, N., & **Roghanchi, P.** (2022). *Accident Analysis of Mining Industry in the United States–A retrospective study for 36 years.* Journal of Sustainable Mining, 21(1), 27-44.
9. Shekarian Y., Rahimi E., Rezaee M., Su W., **Roghanchi P.,** (2021). *Respirable Coal Mine Dust: A Review of Respiratory Deposition, Regulations, and Characterization,* Minerals, 11, pp. 696.
10. Shekarian, Y., Rahimi, E., Shekarian, N., Rezaee, M., & **Roghanchi, P.** (2021). *An analysis of contributing mining factors in coal workers' pneumoconiosis prevalence in the United States coal mines, 1986–2018.* International Journal of Coal Science & Technology, 8(6), 1227-1237.

11. Shahmoradi, J., **Roghanchi, P.,** Hassanalian, M. *Design, analysis and prototyping of a spherical drone for underground mines.* International Journal of Theoretical and Applied Multiscale Mechanics, 4(1), 58-82.
12. Talebi, E., Sunkpal, M., Sharizadeh, T., & **Roghanchi, P.** (2020). *The effects of clothing insulation and acclimation on the thermal comfort of underground mine workers.* Mining, Metallurgy & Exploration, 37, pp. 1827-1836.
13. Shahmoradi J., **Roghanchi P.,** (2020). *The face stability analyses of earth pressure balance tunneling in nonhomogeneous inclined layers*, Journal of Geomechanics, 20(10), 05020005.
14. Shahmoradi J., Talebi E., Hassanalian M., **Roghanchi P.,** (2020). *A comprehensive review of applications of drone technology in the mining industry*, Drones, 4(3) 34-59.
15. **Roghanchi, P.**, & Kocsis, K. C. (2019). *Quantifying the thermal damping effect in underground vertical shafts using the nonlinear autoregressive with external input (NARX) algorithm*. International Journal of Mining Science and Technology, 29(2), 255-262.
16. Sunkpal M., **Roghanchi P.,** Kocsis C.K., (2018). *A method to protect mine workers in hot and humid climates,* Safety and Health at work, 9(2), pp. 149-158.
17. **Roghanchi, P.**, & Kocsis, K. C. (2018). *Challenges in selecting an appropriate heat stress index to protect workers in hot and humid underground mines.* Safety and health at work, 9(1), 10-16.
18. **Roghanchi, P.**, Kocsis, K. C., & Sunkpal, M. (2016). *Sensitivity analysis of the effect of airflow velocity on the thermal comfort in underground mines*. Journal of sustainable mining, 15(4), 175-180.
19. **Roghanchi, P.**, & Kocsis, K. C. (2017). *Improving the climatic conditions in development and production workings of hot underground mines by re-designing the auxiliary ventilation system: a case study.* International Journal of Mining and Mineral Engineering, 8(4), 280-293.
20. **Roghanchi, P.**, Kocsis, K. C., Danko, G., & Powell, A. (2017). *Underground climatic monitoring and modeling: Are we missing something?* Quality-Access to Success, 18.
21. Kallu, R., & **Roghanchi, P.** (2015). *Correlations between direct and indirect strength test methods.* International Journal of Mining Science and Technology, 25(3), 355-360.
22. **Roghanchi, P.**, & Kallu, R. R. (2014). *Block punch index (BPI) test—a new consideration on validity and correlations for basalt and rhyolite rock types.* Journal of Mining Science, 50(3), 475-483.
23. **Roghanchi, P.,** Kallu, R., & Thareja, R. (2013). *A new expression of three adjustment factors of Slope Mass Rating (SMR) Classification.* International Journal of Earth Science and Engineering, 6(3), 7-17.
24. **Roghanchi, P.**, Kallu, R., & Thareja, R. (2013). *Use of Fuzzy Set Theory to RMR Classification for Weak and Very Weak Rock Masses*. International Journal of Earth Science and Engineering, 7(3), 997-1003.

ACTIVE SPONSORED PROJECTS

Design and Demonstration of Intelligent Mine Evacuation and Mine Rescue System, funded by the Center of Disease Control (CDC), cost: $4,497,579 (Sep 2021 – Sep 2025), role: (Co-PI) - share: $600k.

Respirable Coal Mine Dust (RCMD) Research: Characterization, deposition, monitoring, and mitigation of RCMD and capacity building for mine health and safety, funded by the Center of Disease Control (CDC), cost: $1,238,826 (2019 to 2024), role: Co-PI - share: $126,484.

Demonstration of an Intrinsically Safe Drone Propulsion System for Underground Coal Mining Applications, funded by the Alpha Foundation, cost: $617,213 (2020 to 2024), role: Co-PI – share: $27,573.