

**Ali Moradi, Ph.D., P.Eng.**  
[ali.moradi@uky.edu](mailto:ali.moradi@uky.edu)

### PROFESSIONAL PREPARATION

University of Alberta	Edmonton, Canada,	Mining Engineering,	PhD	2018
Amirkabir University	Tehran, Iran,	Mining Engineering,	MSc	2013
Amirkabir University	Tehran, Iran,	Mining Engineering,	BSc	2010

### APPOINTMENTS

01/2024 – present	Assistant Professor, University of Kentucky, Lexington, KY
09/2021 - 12/2023	Assistant Professor, Laval University, Quebec, QC, Canada
05/2021 - 08/2021	Lecturer, University of Alberta, Edmonton, AB, Canada
01/2020 - 08/2021	Lead of Research, University of Alberta, Edmonton, AB, Canada
01/2019 - 01/2020	Mining Engineer-in-Training, Canadian Natural Resources (CNRL), Canada
11/2018 - 01/2020	Post-Doctoral Fellow, University of Alberta, Edmonton, AB, Canada

### SELECTED PUBLICATIONS

- Hazrathosseini, **Ali Moradi Afrapoli (2024)** Maximizing Mining Operations: Unlocking the Crucial Role of Intelligent Fleet Management Systems in Surface Mining's Value Chain, Mining, DOI: [10.3390/mining4010002](https://doi.org/10.3390/mining4010002).
- Hazrathosseini, **Ali Moradi Afrapoli (2024)** Transition to Intelligent Fleet management Systems in Open Pit Mines: A Critical Review on Application of Reinforcement-Learning-Based Systems, Mining Technology, [accepted](#).
- Hazrathosseini, **Ali Moradi Afrapoli (2023)** Intelligent Fleet Management Systems in Surface Mining: Status, Threats, and Opportunities, Mining, Metallurgy & Exploration, DOI: [10.1007/s42461-023-00875-2](https://doi.org/10.1007/s42461-023-00875-2).
- Hazrathosseini, **Ali Moradi Afrapoli (2023)** The Advent of Digital Twins in Surface Mining: Its Time Has Finally Arrived, Resources Policy, DOI: [10.1016/j.resourpol.2022.103155](https://doi.org/10.1016/j.resourpol.2022.103155).
- Tabesh, **Ali Moradi Afrapoli**, Askari-Nasab, **(2023)** A Two-Stage Simultaneous Optimization of NPV and Throughput in Production Planning of Open Pit Mines, Resources Policy, DOI: [10.1016/j.resourpol.2022.103167](https://doi.org/10.1016/j.resourpol.2022.103167).
- Gong, **Ali Moradi Afrapoli**, Askari-Nasab **(2023)** Near-face stockpile open pit mining: a method to enhance NPV and quality of the plant throughput, International Journal of Mining, Reclamation and Environment, DOI: [10.1080/17480930.2022.2160891](https://doi.org/10.1080/17480930.2022.2160891).

7. Gong, **Ali Moradi Afrapoli**, Askari-Nasab (2023) Integrated Simulation and Optimization Framework for Quantitative Analysis of Near-Face Stockpile Mining, Simulation Modelling Practice and Theory, DOI: [10.1016/j.simpat.2023.102794](https://doi.org/10.1016/j.simpat.2023.102794).
8. Rahnema, Amirmoeini, **Ali Moradi Afrapoli** (2023) Incorporating Environmental Impacts into Short-Term Mine Planning: A Literature Survey, Mining, DOI: [10.3390/mining3010010](https://doi.org/10.3390/mining3010010).
9. Ghasempour, **Ali Moradi Afrapoli** (2023) Sustainable open pit fleet management system: integrating economic and environmental objectives in truck allocation, Journal of Mining Technology, DOI: [10.1080/25726668.2023.2233230](https://doi.org/10.1080/25726668.2023.2233230).
10. Nikbin, **Ali Moradi Afrapoli** (2023) Short-term blend optimization for multi-element open pit mines using a multiple objective goal programming approach. International Journal of Mining, Reclamation and Environment, DOI: [10.1080/17480930.2023.2242163](https://doi.org/10.1080/17480930.2023.2242163)
11. **Ali Moradi Afrapoli**, Upadhyay, Askari-Nasab (2022) A Nested Multiple Objective Optimization Algorithm for Managing Production Fleets in Surface Mines, Engineering Optimization, DOI: [10.1080/0305215X.2022.2153840](https://doi.org/10.1080/0305215X.2022.2153840).
12. Yeganejou, Badiozamani, **Ali Moradi Afrapoli**, Askari-Nasab (2022) Integration of simulation and dispatch modelling to predict fleet productivity: an open-pit mining case, Mining Technology, 131:2, 67-79, DOI: [10.1080/25726668.2021.2001255](https://doi.org/10.1080/25726668.2021.2001255).
13. Upadhyay, Tabesh, Badiozamani, **Ali Moradi Afrapoli**, Askari-Nasab (2021) A simulation-based algorithm for solving surface mines' equipment selection and sizing problem under uncertainty, CIM Journal, 12:1, 36-46, DOI: [10.1080/19236026.2021.1872995](https://doi.org/10.1080/19236026.2021.1872995).
14. **Ali Moradi Afrapoli**, Upadhyay, Askari (2021) Truck dispatching in surface mines -Application of fuzzy linear programming. Journal of the Southern African Institute of Mining and Metallurgy, 121:9, 505-512. DOI: [10.17159/2411-9717/522/2021](https://doi.org/10.17159/2411-9717/522/2021).
15. **Ali Moradi Afrapoli**, Askari-Nasab (2020) A stochastic integrated simulation and mixed integer linear programming optimisation framework for truck dispatching problem in surface mines, Journal of Mining and Mineral Engineering, 11:4, 257-284, DOI: [10.1504/IJMME.2020.111929](https://doi.org/10.1504/IJMME.2020.111929).
16. **Ali Moradi Afrapoli**, Askari-Nasab (2019) Mining fleet management systems: a review of models and algorithms, International Journal of Mining, Reclamation and Environment, 33:1, 42-60, DOI: [10.1080/17480930.2017.1336607](https://doi.org/10.1080/17480930.2017.1336607).
17. **Ali Moradi Afrapoli**, Tabesh, Askari-Nasab (2019) A multiple objective transportation problem approach to dynamic truck dispatching in surface mines, European Journal of Operational Research, 276:1, 331-342, DOI: [10.1016/j.ejor.2019.01.008](https://doi.org/10.1016/j.ejor.2019.01.008).
18. **Ali Moradi Afrapoli**, Tabesh, Askari-Nasab (2019) A stochastic hybrid simulation-optimization approach towards haul fleet sizing in surface mines, Mining Technology, 128:1, 9-20, DOI: [10.1080/25726668.2018.1473314](https://doi.org/10.1080/25726668.2018.1473314).

19. **Ali Moradi Afrapoli**, Upadhyay, Askari-Nasab (2018) A Fuzzy Logic Approach towards Truck Dispatching Problem in Surface Mines, International Journal of Mechanical and Production Engineering, 6:12, 79-84.
20. **Ali Moradi Afrapoli**, Osanloo (2014) Determination and stability analysis of ultimate open-pit slope under geomechanical uncertainty, International Journal of Mining Science and Technology, 24:1, 2014, 105-110, DOI: [10.1016/j.ijmst.2013.12.018](https://doi.org/10.1016/j.ijmst.2013.12.018).

#### **OTHER SIGNIFICANT PUBLICATIONS**

1. **Ali Moradi Afrapoli**, Askari-Nasab (2023) Chapter 13 - Fleet Management Systems, SME Surface Mining Handbook, SME.
2. **Ali Moradi Afrapoli**, Askari-Nasab (2023) Chapter 8 - Advanced Analytics for Surface Extraction, Advanced Analytic in Mining Engineering, Springer.