Curriculum Vitae

Yashar Pourrahimian, Ph.D., P.Eng.

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Dr. Pourrahimian has 20 years of research, teaching, and consulting experience. His main research area focuses on utilizing operations research and intricate analytical methodologies, such as mathematical modeling, optimization, continuous/discrete event simulation, and intelligent agents, to attain optimal outcomes for planning and decision-making in large-scale mining operations. As an accomplished faculty member with extensive expertise in block cave mining production scheduling, his objective is to utilize my experience in teaching, research, and industry engagement to promote sustainable practices and develop innovative and practical solutions to the challenges faced in block cave mining production scheduling, while mentoring the next generation of mining professionals.

PROFESIONAL EXPERIENCE

Associate Professor (Full time) — Jul 2019 – Present
University of Alberta, Edmonton, AB, Canada

Assistant Professor (Full time) — Apr 2013 – June 2019
University of Alberta, Edmonton, AB, Canada

Research Assistant (Full time) — Jan 2013 – March 2013
University of Alberta, Edmonton, AB, Canada

Teaching and Research Assistant (Full time) — Sep 2008 – Dec 2012
University of Alberta, Edmonton, AB, Canada

Faculty Member (Full time) — Sep 2003 – Jun 2008
Sahand University of Technology, Tabriz, Iran.

Geotechnical and Grouting Engineer (Part-time) — Jan 2002 – Aug 2003
Khavar Tunnel Consulting Engineers Co., Iran

EDUCATION

Ph.D. in Mining Engineering (Mine Planning and Optimization) — Sep 2008 – Dec 2012
University of Alberta, Edmonton, Canada
Dissertation: Mathematical programming for sequence optimization in block-cave mining

M.Sc. in Mining Engineering (Rock Mechanics) — Sep 2001 – Aug 2003
University of Tehran, Tehran, Iran
(Second rank among all Mining Engineering graduates)
Dissertation: Theoretical prediction of grout penetration radius and its distribution into jointed rock masses.

B.Sc. in Mining Engineering (Mining Exploitation) — Jan 1998 – June 2001
Sahand University of Technology, Tabriz, Iran
(First rank among all Mining Engineering graduates)

PROFESSIONAL STATUS

Association of Professional Engineers and Geoscientists of Alberta (APEGA) — Aug 2016 – Present
Registered Professional Engineer (P.Eng)

JOURNAL EDITORSHIPS

Special Issues

Guest Editor: Modelling and optimization for Sustainable Resource Development (Sustainability – MDPI)	2023
Guest Editor: Recent Advances in Underground Mine Planning, Scheduling, and Optimization: Theory and Applications (Mining – MDPI)	2021-2022

Editorial Board Member
Mining, MDPI   2020-present

Editorial Board Member
Journal of Mining and Environment (JME)   2020-present

Associate Editor
Aspects in Mining & Mineral Science (AMMS) – Crimson Publisher   2017-present

Editorial Board Member
Global Journal of Earth Science and Engineering – Avanti Publishers   2017-2019

HONORS AND AWARDS

Early Career Researcher Award, Department of Civil and Environmental Engineering, UofA	2019
Early Career Researcher Award, Department of Civil and Environmental Engineering, UofA	2018
Early Career Researcher Award, Department of Civil and Environmental Engineering, UofA	2017
Best oral presentation award, 3rd annual Graduate Research Symposium, UofA	2012
J Gordin Kaplan Graduate Student Award	2012
Graduate Research Award, University of Alberta, Canada	2008
Outstanding Researcher, Sahand University of Technology, Iran	2007
Outstanding Graduate in Rock Mechanics (2nd Rank), University of Tehran, Iran	2003
Outstanding Graduate in Mine Exploitation (1st Rank), Sahand Uni. of Technology, Iran	2003

Honors and awards received by students supervised

HQP name	Award and Honors	Organization
Doctoral		
Magreth Dotto	International Society of Explosives Engineers	ISEE
Magreth Dotto	Jerry McDowell Memorial Scholarship	ISEE
Magreth Dotto	Dale Ramsey Scholarship (2021)	ISEE
Soroush Khazaei	Doctoral Recruitment Scholarship	UofA
Firouz Khodayari	GSA Professional Development Award (2015)	UofA
Firouz Khodayari	Jacob h Masliyah Graduate Award in Oil Sands Engineering (2015)	UofA
Firouz Khodayari	Shell Enhanced Learning Fund (2016)	UofA
Firouz Khodayari	Green & Gold Student Leadership and Professional Development Grant (2017)	UofA
Firouz Khodayari	Graduate Student Teaching Award (2018)	UofA
Magreth Dotto	Inter-department Award (2017)	UofA
Master		
Roberto Noriega	Inter-department Award (2018)	UofA
Zeinab Basiri	FGSR Travel Award (2018)	UofA
Saha Malaki	Prairie Mines & Royalty Ltd graduate Scholarship in Environmental Engineering (2015)	UofA
David Omane	UofA Master's Recruitment Scholarship (2015)	UofA
David Omane	GSA Professional Development Award (2017)	UofA

SERVICE AND PROFESSIONAL ACTIVITIES

Faculty/Departments:

Engineering Certificate Program Advisory Committee	2022-present
Engineering Undergraduate Students/Staff Committee	2020-present
Mining Group Graduate Coordinator	2020-present
Organizer and Coordinator of Mining Industry Night	2018-present
Faculty of Engineering Graduate Attribute Review Committee	2017-2020
Mining Group Undergraduate Advisor	2014-2019
Canadian Mining Games, UofA Team Advisor	2014-present
Mining Industry Advisory Committee (Marketing sub-committee from 2018)	2013-present
Actively engaged in Department Open House	2013-present

Professional Leadership:

Editorial committee member of the 8th International Conference on Operational Excellence in Mining – Minexcellence 2023, Chile (Nov 29 - Dec 1, 2023)	2023
Executive committee member of the 8th International Conference on Geology and Mine Planning, Chile (July 12-14, 2023)	2022-2023
Program visitor for accreditation visit to British Columbia Institute of Technology	Nov 2022
Exam design for 18-MMP-A2, Underground Mining Methods and Design for Professional Engineers Ontario	Aug 2022
Invited judge for student poster Session at CIM Convention 2022	May 2022
Member of the Board of Examiners, The Association of Professional Engineers and Geoscientists of Alberta (APEGA)	2018-present
Invited judge for student poster Session at CIM Convention 2018	2018
Supervised the Mining Games Team and managed the account (Team ranked 1st in Canada 2018, 2019, and 2020)	2014-present

Workshop (International Capacity Development Projects & Programs, UofA):

Mining fundamentals (2 days, Nov 2nd & 3rd 2017) for Mongolian ministry employees.	
University of Alberta is involved with the international development project, "Strengthening Extractive Sector Management in Mongolia" (SESMIM), which is being led by Agriteam Canada, and funded by Global Affairs Canada (GAC). I gave a 2-day workshop for four Mongolian representatives from the Ministry of Mining and Heavy Industry, the Ministry of Environment and Tourism, and the Ministry of Finance in the UofA International office.	2017

Membership:

● An active member of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM)	2011-present
● Professional member of Society for Mining, Metallurgy, and Exploration (SME)	2011-present
● Professional member of Underground Construction Association of SME	2013-present

Peer Reviewer

Journals:

International Journal of Rock Mechanics and Mining Science (Elsevier)	2010-present
International Journal of Mining and Mineral Engineering (Inderscience)	2011-present
International Journal of Mining Science and Technology (Elsevier)	2012-present
Mining Technology IMM Transactions Section A (Maney)	2013-present
Neural Computing and Applications (Springer)	2015-present

International Journal of Mining and Geo-Engineering	2016-present
Journal of Engineering	2016-present
European Journal of Operations Research (Elsevier)	2016-present
Journal of Sustainable Mining (Elsevier)	2017-present
Stochastic Environmental Research and Risk Assessment (Springer)	2017-present
International Journal of Mining, Reclamation and Environment	2017-present
Resources Policy (Elsevier)	2017-present
Computers and Operations Research	2018-present
Minerals (MDPI)	2018-present

Grants

- NSERC Alliance Grants
- NSERC CRD Grants
- NSERC Discovery Grants
- MITACS Grants
- International: National Research and Development Agency, Chile

TEACHING EXPERIENCE

Courses taught at the University of Alberta:

Undergraduate
- MIN E 325: Mine Planning and Design
- MIN E 407: Mine Ventilation
- MIN E 402: Mine Design Project I
- MIN E 403: Mine Design Project II
- MIN E 413: Surface Mining Methods and Operations Management

Graduate
- MIN E 610: Principles of Mining Engineering

Courses taught at the Sahand University of Technology:

Undergraduate
- Surface Mine Planning and Design
- Underground Mining Methods
- Rock Mechanics
- Design of Supports in Mines
- Static and Strength of Material
- Computer Applications in Mining Engineering
- Mine Field trip

RESEARCH

Research interests

- Block/panel /sub-level caving production scheduling optimization/simulation
- Data-driven mine optimization (AI, ML)
- Mathematical programming (MILP, Qp, LP, MILGP) for sequence, stope boundary, and stope layout optimization
- Simulation optimization of mining systems

PUBLICATIONS
PEER-REVIEWED JOURNAL PAPERS

a) Published or accepted; names of students and postdoctoral researchers underlined

J43) E. Andrew, E. Ben-Awuah and **Y. Pourrahimian**, (2023), "Life-of-mine optimization for integrated open stope development and production scheduling using a mixed-integer linear programming framework", *Mining Technology (Trans. Inst. Min. Metall. A)*, (https://doi.org/10.1080/25726668.2023.2182285).

J42) M. Sungwa Dotto, **Y. Pourrahimian**, T. Grain Joseph, D. Apel (2022), "Assessment of blast energy usage and induced rock damage in hard rock open-pit mines", *CIM Journal*, Vol. 13, No. 4, pp. 166-180, (https://doi.org/10.1080/19236026.2022.2126924).

J41)   P. Nobahar, **Y. Pourrahimian**, and F. Mollaei Koshki, (2022), "Optimum fleet selection using machine learning algorithms-case study: Zenouz Kaolin Mine", *Mining (MDPI)*, Vol. 2, No. 3, pp. 528-541. (The article belongs to the special issue Mine Automation and New Technologies)

J40)   R. Noriega and **Y. Pourrahimian** (2022), "A systematic review of artificial intelligence and data-driven approaches in strategic open-pit mine planning", *Resources Policy*, Vol. 77-102727 (https://doi.org/10.1016/j.resourpol.2022.102727)

J39)   M. Shamsi, **Y. Pourrahimian**, and M. Rahmanpour, (2021), "Optimization of open-pit mine production scheduling considering optimum transportation system between truck haulage and semi-mobile in-pit crushing and conveying system", *International Journal of Mining, Reclamation and Environment*, (https://doi.org/10.1080/17480930.2021.1996983).

J38)   R. Noriega, **Y. Pourrahimian**, and E. Ben-Awuah (2021), "Optimization of life-of-mine production scheduling for block-caving mines under mineral resource and material mixing uncertainty", *International Journal of Mining, Reclamation and Environment*, (https://doi.org/10.1080/17480930.2021.1976010).

J37)   S. Khazaei and **Y. Pourrahimian**, (2021), "Mathematical Programming Application in Sublevel Caving Scheduling", *Mining* (MDPI), Special Issue: *Recent Advances in Underground Mine Planning, Scheduling, and Optimization: Theory and Applications*, Vol. 1, No. 2, pp. 180-191.

J36)   H. Xu, D. Apel, J. Wang, C. Wei, and **Y. Pourrahimian**, (2021)," Investigation of backfilling step effects on slope stability", *Mining* (MDPI), Special Issue: *Recent Advances in Underground Mine Planning, Scheduling, and Optimization: Theory and Applications*, Vol. 1, No. 2, pp. 155-166.

J35)   D. Liu and **Y. Pourrahimian**, (2021)," A framework for open-pit mine production scheduling under semi-mobile in-pit crushing and conveying systems with the high angle conveyor", *Mining* (MDPI), Vol. 1, No. 1, pp. 59-79.

J34)   Sh. Paravarzar, H. Askari-Nasab, **Y. Pourrahimian**, and X. Emery, (2021), "Simultaneous multi-sector block cave mine production scheduling considering operational uncertainties", *Mining Technology* (TIMM A), © IOM3, Vol. 130, No. 1, pp.36-51. (https://doi.org/10.1080/25726668.2021.1872261).

J33)   Sh. Paravarzar, **Y. Pourrahimian**, H. Askari-Nasab, and X. Emery, (2021), "Short-term underground mine planning: A review", *International Journal of Mining and Mineral Engineering* (IJMME), © Inderscience Enterprises Ltd, Geneve, Switzerland, Vol. 12, No. 1, pp. 1-33.

J32)   Sh. Paravarzar, H. Askari-Nasab, **Y. Pourrahimian**, and X. Emery, (2021), "Operational mine planning in block cave mining: a simulation-optimization approach", *International Journal of Mining, Reclamation and Environment*, Vol. 35, No. 3, pp. 199-218, (https://doi.org/10.1080/17480930.2020.1804039).

J31)   A. Maremi, E. Ben-Awuah, and **Y. Pourrahimian** (2020), "An automated production targeting goal programming framework for oil sands mine planning considering organic rich solids", *Mining Technology (Trans. Inst. Min. Metall. A)*, Vol. 129, No. 2, pp. 53-67, (https://doi.org/10.1080/25726668.2020.1749431).

J30)   R. Noriega, **Y. Pourrahimian**, and E. Ben-Awuah (2020), "A two-step mathematical programming framework for undercut horizon optimization in block caving mines", *Resources Policy*, © Elsevier, Vol. 65, (101586), (https://doi.org/10.1016/j.resourpol.2020.101586).

J29)   E. Ugarte Zarate, **Y. Pourrahimian**, and J. Boisvert, (2020), "Optimizing block caving drawpoints over multiple geostatistical models", *International Journal of Mining, Reclamation and Environment*, © Taylor& Francis, Vol. 34, No. 1, pp. 55-74, (https://doi.org/10.1080/17480930.2018.1532866)

J28)   V. Nikbin, M. Ataee-pour, K. Shahriar, and **Y. Pourrahimian**, (2020)," A 3D approximate hybrid algorithm for stope boundary optimization", *Computer and Operations Research*, © Elsevier, Vol. 115 (104475), (https://doi.org/10.1016/j.cor.2018.05.012).

J27)   N. Seyed Hosseini, E, Ben-Awuah, and **Y. Pourrahimian**, (2020)," A two-step approach to incorporate cut-off grade and stockpiling in oil sands mine planning optimization framework", *Computer and Operations Research*, © Elsevier, Vol. 15 (104659) (https://doi.org/10.1016/j.cor.2019.03.005).

J26)   F. Sotoudeh, M. Ataei, R. Kakaie, and Y. Pourrahimian, (2019), "Application of sequential Gaussian conditional simulation into underground mine design under grade uncertainty", Journal of Mining and Environment, (https://doi.org/10.22044/jme.2019.7333.1582).

J25)   F. Nezhadshahmohammad, M. Saeedi, and **Y. Pourrahimian**, (2019), "Modelling of train-induced vibration in subway interactions", *International Journal of Geotechnical Engineering*, Vol. 15, No. 1, pp. 120-128, (https://doi.org/10.1080/19386362.2019.1681816).

J24) F. Khodayari, **Y. Pourrahimian**, and V. W. Liu, (2019), "Production scheduling with horizontal mixing simulation in block cave mining", Journal of Mining Science, © Springer, Vol. 55, No. 5, pp. 789-803.

J23) Y. Pu, D. Apel, and **Y. Pourrahimian**, (2019), "Evaluation of rockburst potential in Kimberlite using Fruit Fly optimization algorithm and generalized regression neural networks", *Archives of Mining Sciences*, Vol. 64, No. 2, pp. 279-296.

J22) A. Azadmehr, E. Jalali, and **Y. Pourrahimian**, (2019), "Development of a rock mass fragmentation index, using a hybrid method of rock engineering system", *Rock Mechanics and Rock Engineering* (RMRE), © Springer, Vol. 52, No. 11, pp. 4403-4419.

J21) F. Khodayari and **Y. Pourrahimian**, (2019), "Long-term production scheduling optimization and 3-D material mixing analysis for block caving mines", *Mining Technology* (TIMM A), © IOM3, Vol. 128, No. 2, pp. 65-76.

J20) F. Nezhadshahmohammad, H. Aghababaei, and **Y. Pourrahimian**, (2019), "Conditional Draw rate control system in block-cave production scheduling using mathematical programming", *International Journal of Mining, Reclamation and Environment*, Vol. 33, No. 4, pp. 223-246.

J19) V. Nikbin, M. Ataee-pour, K. Shahriar, **Y. Pourrahimian**, and S. A. MirHassani, (2019), "Stope boundary optimization: A mathematical model and efficient heuristics", *Resources Policy*, © Elsevier, Vol. 62, pp. 515-526, (https://doi.org/10.1016/j.resourpol.2018.10.007)

J18) F. Nezhadshahmohammad and **Y. Pourrahimian**, (2018), "A clustering algorithm for block-cave production scheduling", *Global Journal of Earth Science and Engineering*, © Avanti Publisher, Vol. 5, pp. 45-53.

J17) F. Nezhadshahmohammad, **Y. Pourrahimian**, and H. Aghababaei, (2018), "Presentation and application of a multi-index clustering technique for the mathematical programming of block-cave production scheduling", *International Journal of Mining Science and Technology*, © Elsevier, Vol. 28, pp. 941-950.

J16) F. Nezhadshahmohammad, H. Aghababaei, and **Y. Pourrahimian**, (2018),"Draw rate management system using mathematical programming in extraction sequence optimisation of block cave mining", *International Journal of Mining and Mineral Engineering* (IJMME), © Inderscience Enterprises Ltd, Geneva, Vol. 9, No. 1, pp. 32-53.

J15) H. Yu, L. Wu, W. V. Liu, and **Y. Pourrahimian**, (2018)," Effects of fibers on expansive shotcrete mixtures consisting of calcium sulfoaluminate cement, ordinary Portland cement, and calcium sulfate", *Journal of Rock Mechanics and Geotechnical Engineering*, © Elsevier, Vol. 10, No. 2, pp. 2121-221.

J14) D. Omane, W. V. Liu, and **Y. Pourrahimian**, (2018), "Comparison of chemical suppressants under different atmospheric temperatures for the control of fugitive dust emission on mine haul roads", *International Journal of Mining Science and Technology*, © Elsevier, Vol. 9, No. 3, pp. 561-568.

J13) A. Yaghini, **Y. Pourrahimian**, and R. A. Hall, (2018), "Human factor and human error in mining industry; a review and lessons from other industries", *CIM Journal (Canadian Institute of Mining, Metallurgy and Petroleum)*, Vol. 9, No. 1, pp. 5-20.

J12) F. Khodayari and **Y. Pourrahimian**, (2017),"Production scheduling in block caving with consideration of material flow", *Aspects in Mining and Mineral Science* (AMMS), © Crimson Publishers, (Open access).

J11) E. Ben-Awuah, O. Richter, T. Elkington, and **Y. Pourrahimian**, (2016), "Strategic mining options optimization: open pit mining, underground mining or both", *International Journal of Mining Science and Technology*, © Elsevier, Vol. 26, No. 6, pp. 1065-1071.

J10) F. Khodayari and **Y. Pourrahimian**, (2015),"Mathematical programming applications in block-caving scheduling: a review of models and algorithms", *International Journal of Mining and Mineral Engineering* (IJMME), © Inderscience Enterprises Ltd, Geneve, Vol. 6, No. 3, pp. 234-257.

J9) **Y. Pourrahimian** and H. Askari-Nasab, (2014), "An application of mathematical programming to determine the best height of draw in block-cave sequence optimization", *Mining Technology (Trans. Inst. Min. Metall. A)*, © Maney, Vol. 123, No. 3, pp. 162-172.

J8) **Y. Pourrahimian**, H. Askari-Nasab, and D. Tannant, (2013), "A multi-step approach for block cave production scheduling optimization", *International Journal of Mining Science and Technology*, © Elsevier, Vol. 23, No. 5, pp. 739-750.

J7) **Y. Pourrahimian**, H. Askari-Nasab, and D. Tannant, (2012), "Mixed-integer linear programming formulation for block cave sequence optimization", *International Journal of Mining and Mineral Engineering* (IJMME), © Inderscience Enterprises Ltd, Geneve, Switzerland, Vol. 4, No. 1, pp. 26-49.

J6) H. Askari-Nasab, **Y. Pourrahimian**, E. Benn-Awuah, and S. Kalantari, (2011), "Mixed-integer linear programming formulations for open pit production scheduling", *Journal of Mining Science*, Vol. 47, No. 3, pp. 338-359.

J5) E. Ben-Awuah, S. Kalantari, **Y. Pourrahimian**, and H. Askari-Nasab, (2010), "Hierarchical mine production scheduling using discrete-event simulation", *International Journal of Mining and Mineral Engineering (IJMME)*, © Inderscience Enterprises Ltd, Geneve, Switzerland, Vol. 2, No. 2, pp.137-158.

J4) S. Gheibie, S. H. Hoseinie, H. Aghababaei, **Y. Pourrahimian**, (2009), "Modified Kuz-ram fragmentation model and its use at the Sungun copper mine", *International Journal of Rock Mechanics and Mining Science*. Vol. 46, Issue 6, pp.967-973.

J3) S. H. Hoseinie, H. Aghababaei, **Y. Pourrahimian**, (2008), "Development of a new classification system for assessing of Rock mass Drillability index (RDi)", *International Journal of Rock Mechanics and Mining Science*, Vol. 45, Issue 1, pp.1-10.

J2) S. H. Hoseinie, **Y. Pourrahimian**, and H. Aghababaei, (2007), "Physical modelling of joints spacing and filling effects on drilling efficiency of open cast mines", *Mining Engineering Scientific Quarterly Journal*, Iranian Mining Engineering Organization. Vol. 1, No. 1, pp.41-48. (In Persian)

J1) S. H. Hoseinie, H. Aghababaei and **Y. Pourrahimian**, (2007), "Analyzing and physical modelling of joints dipping effects on penetration rate of rotary drilling in open pit mines", *Geosciences, Scientific Quarterly Journal*, Ministry of industries and mines geological survey of Iran. Vol. 16, No. 63. pp.86 – 91. (In Persian)

b) Book Edited (Symposium proceedings, periodicals, etc.)

B5) Badiozamani, MM., **Pourrahimian, Y.**, Ben-Awuah, E., Maradi Afrapoli, A., and Askari-Nasab, H., (2022), Mining Optimization Laboratory (MOL) - Report Ten, © MOL, University of Alberta, Edmonton, Canada, 425 Pages, ISBN: 978-1-55195-486-8.

B4) **Y. Pourrahimian**, E. Ben-Awuah and H. Askari-Nasab, (2018), Mining Optimization Laboratory (MOL) - Report Nine, © MOL, University of Alberta, Edmonton, Canada, 378 Pages, ISBN: 978-1-55195-414-1.

B3) **Y. Pourrahimian**, E. Ben-Awuah and H. Askari-Nasab, (2017), Mining Optimization Laboratory (MOL) - Report Eight, © MOL, University of Alberta, Edmonton, Canada, 310 Pages, ISBN: 978-1-55195-383-0.

B2) **Y. Pourrahimian**, E. Ben-Awuah and H. Askari-Nasab, (2016), Mining Optimization Laboratory (MOL) - Report Seven, © MOL, University of Alberta, Edmonton, Canada, 240 Pages, ISBN: 978-1-55195-367-0.

B1) **Y. Pourrahimian**, E. Ben-Awuah and H. Askari-Nasab, (2015), Mining Optimization Laboratory (MOL) - Report Six, © MOL, University of Alberta, Edmonton, Canada, 250 Pages, ISBN: 978-1-55195-356-4.

PRESENTATIONS and CONFERENCE PAPERS
(Names of students and postdoctoral researchers underlined.)

C46) R. Noriega and **Y. Pourrahimian**, (2023), "Truck fleet dispatching control in open-pit mining based on reinforcement learning and discrete event simulation", APCOM 2023 - Intelligent Mining: Innovation, Vision, and Value, June 25-28, 2023, South Dakota.

C45) S. Khazaei and A. Mousavi, and **Y. Pourrahimian**, (2023), "An integrated approach for long-term production scheduling optimization of sublevel caving mines using the mixed-integer-linear-programming model", APCOM 2023 - Intelligent Mining: Innovation, Vision, and Value, June 25-28, 2023, South Dakota.

C44) M. Dotto and **Y. Pourrahimian**, (2023), "The effect of rock mass properties on explosive energy in rock blasting", APCOM 2023 - Intelligent Mining: Innovation, Vision, and Value, June 25-28, 2023, South Dakota.

C43) M. Al-Masri , **Y. Pourrahimian**, A. Yaghini, (2022),"Simulation and analysis of loading practices for trucks and shovels under production variability", *CIM Convention 2022, CIM (Canadian Institute of Mining, Metallurgy and Petroleum)*, May 1-3, Vancouver, BC, Canada.

C42) R. Noriega and **Y. Pourrahimian**, (2020), "Definition of an envelope and life-of-mine production schedule for block caving mines under grade and material flow uncertainty", *MassMin 2020*, Santiago, Chile, Dec 9-11.

C41) Sh. Paravarzar, H. Askari-Nasab, **Y. Pourrahimian**, and X. Emery, (2020), "Investigation of the effects of the operational parameters on the daily production schedule in panel caving using mathematical programming", *MassMin 2020*, Santiago, Chile, Dec 9-11.

C40) R. Noriega, Sh. Paravarz, **Y. Pourrahimian**, and W.V. Liu, (2019), "A new method to select the optimum undercut elevation in block caving mines", *2019 SME Annual Conference and Expo*, Feb 24-27, Denver, Colorado, United States.

C39) R. Noriega, **Y. Pourrahimian**, and W.V. Liu, (2018), "Determination of undercut horizon in block caving mines using mathematical programming", *4th International Symposium on Block and Sublevel Caving* (Caving 2018), Vancouver, Canada, Oct 15-17, pp. 363-372.

C38) F. Khodayari, **Y. Pourrahimian**, and E. Ben-Awuah, (2018), "Application of mathematical modelling for draw control under material flow uncertainty ", *4th International Symposium on Block and Sublevel Caving* (Caving 2018), Vancouver, Canada, Oct 15-17, pp. 815-822.

C37) Y. Guo, J. Komar, W. V. Liu, M. Sepehri, and Y. Pourrahimian, (2018), "Considering groundwater advection on the design of borehole heat exchanger – a review of analytical solutions", *Geo Edmonton 2018*, 71st Canadian Geotechnical Conference and the 13th Joint CGS/IAH-CNC Groundwater Conference, Edmonton, Canada, Sep 23-26.

C36) H. Yu, L. Wu, W. V. Liu, and **Y. Pourrahimian**, (2018)," Effect of fibers on expansive shotcrete mixtures containing calcium sulfoaluminate", *CIM Convention 2018, CIM (Canadian Institute of Mining, Metallurgy and Petroleum)*, May 6-9, Vancouver, BC, Canada, (Paper 1931).

C35) D. Omane, W. V. Liu, and **Y. Pourrahimian**, (2018), "A ranking of dust suppressants under different atmospheric temperatures to control fugitive dust generated from mines haul roads", *2018 SME Annual Conference and Expo,* Feb 25-28, Minneapolis, Minnesota, United States.

C34) F. Nezhadshahmohammad, F. Khodayari, and **Y. Pourrahimian**, (2017), "Draw rate optimization in block cave production scheduling using mathematical programming", *1st International Conference on Underground Mining Technology (UMT 2017)*, October 11-13, Sudbury, Canada, pp. 309-321.

C33) S. Malaki, F. Khodayari, **Y. Pourrahimian**, and W. V. Liu, (2017), "An application of mathematical programming and sequential Gaussian simulation for block-cave production scheduling", *1st International Conference on Underground Mining Technology (UMT 2017)*, October 11-13, Sudbury, Canada, pp. 323-337.

C32) E. Ugarte-Zarate, **Y. Pourrahimian**, J. Boisvert, (2017), "Determination of optimum drawpoint layout in block caving using sequential Gaussian simulation", *1st International Conference on Underground Mining Technology (UMT 2017)*, October 11-13, Sudbury, Canada, pp. 339-349.

C31) D. Omane, W. V. Liu, and **Y. Pourrahimian**, (2017), "Evaluating dust suppressants on mine haul roads", *2017 Alberta NWT/Nunavut Regional Canadian Mineral Processors Conference (CMP 2017),* Oct 25, Fort McMurray, Alberta, Canada.

C30) A. Yaghini, **Y. Pourrahimian**, and R. A. Hall, (2017), "The human factor analysis and classification system (HFACS); a review and lessons from other industries", *MEMO 2017, CIM (Canadian Institute of Mining, Metallurgy and Petroleum)*, September 24-27, Saskatoon, Saskatchewan, Canada, (Paper 1868).

C29) F. Nezhadshahmohammad, **Y. Pourrahimian**, and H. Aghababaei, (2017), "Presentation of draw control criteria in block caving and improvement of production planning", *CIM 2017 Convention,* April 30- May 3, Montreal, Canada, (Paper 1516).

C28) H. Yu, L. Wu, W. V. Liu, and **Y. Pourrahimian**, (2017), "Developing shrinkage-compensating shotcrete mixtures from calcium sulfoaluminate, portland cement, and calcium sulfate", CIM *2017 Convention,* April 30- May 3, Montreal, Canada, (Paper 1453).

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