

Mehrnoosh Heydari CV

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Summary:

Experienced Mining Engineer with a Ph.D. in Mining Engineering and a proven track record in sustainable mining practices and critical mineral research. Skilled in advanced mining technologies, supply chain analysis, and project management, with significant international experience. Seeking to contribute to cutting-edge research and innovation.

Academic Background:

Ph.D. of Mining Engineering

Amirkabir University of Technology (Tehran Polytechnics), Mining Engineering Department, Tehran, Iran
Graduation: January 2024

Master of Mining Engineering

University of Tehran, College of Engineering, Tehran, Iran
Graduation: September 2014

Master of Business Administration (MBA) Certificate

University of Tehran, College of Engineering, Tehran, Iran
Graduation: June 2014

Bachelor of Mining Engineering

Amirkabir University of Technology (Tehran Polytechnics), Mining Engineering Department, Tehran, Iran
Graduation: September 2010

Work Experience:

Research Associate

University of Cambridge, UK

April 2024 - Present

- Leading research on critical mineral processing value addition in Southern African countries., Developed strategies for supply risk mitigation and sustainability of critical minerals globally., Preparing presentations and publications for key stakeholders., Project funds: £95m grant over nine years (2021 to 2030) by FCDO

Consultant

Climate Compatible Growth (CCG) Project, UK

January 2024 - March 2024

- Conducted supply chain analysis for critical minerals., Developed models to enhance supply chain resilience.

Co-founder and Chief Editor

B Plus Bulletin, Mining Students magazine

January 2023-December 2023

- Established and managed the new student-run magazine to provide a platform to showcase work from the mining programs nationally and internationally, Coordinated publication procedure, monitored budget (£1000 for each publication), organized fundraising, and ensured financially sustainable operation.

Bolour Quarterly, Mining Engineering Scientific Journal

January 2022 - June 2024

<https://bolourjournal.ir/en/>

- Managed editorial processes and journal operations, ensuring timely publication of volumes, Coordinated peer-review processes and set high editorial standards., and Successfully raised £2200 per publication series from academia and industry sponsors.

Member of Editorial Board

May 2019 - December 2021

- Reviewed articles and provided feedback to enhance manuscript quality., Assisted in journal production tasks, contributing to the journal's top-ranked status in Iran.

Student Scientific Association President

Department of Mining Engineering, Amirkabir University of Technology, Tehran, Iran

September 2022- December 2023

- Organized the National Mining Day Symposium focused on "Women in Mining," attracting over 400 attendees and significant media attention., Gathered and raised £6,600 from industry and academia to fund the symposium, ensuring a high-quality event and wide participation., Led logistical and promotional efforts to ensure successful execution, enhancing visibility and engagement within the mining community.

Research Assistant

Department of Mining Engineering, Amirkabir University of Technology, Tehran, Iran

September 2018-January 2024

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- Focused on sustainable mining practices and mineral extraction., Published findings in national and international conferences and prestigious journals.

Research and Development (R&D) Engineer/Manager

Keyhan Payesh Alvand (KePA) Company, Iran.

www.kepaminerals.com

December 2014 – December 2023

- Led mine planning and design for Cheshmeh Pahn, optimizing production and reducing material loss.
- Strategically selected waste dump sites, implementing plans that saved £20k in profit loss and penalties by solving the excessive waste volume dumping and environmental concerns.
- Conducted a social impact assessment, significantly improving community relations by gaining social license to operate (SLO) and reducing conflicts by 80%.
- Developed GIS spatial models to protect 70% of local water resources, earning a governmental prize valued at £1200 per month for 5 years for the company.
- Conducted feasibility studies, establishing KePA as a leading Andalusite producer globally.

Volunteer works:

2018 – present. Reviewer of several scientific journals, reviewed more than 50 papers so far.

2013 – Present. Seebe sorkh Charity (<http://seebesorkh.org/>)

Provided help at the charity organization, assisted with fundraising, events, and community outreach activities

Journal Publications:

1. Heydari, M., Osanloo, M., (2025), "A Spatiotemporal Environmental Sustainability Assessment Model for Deep and Large-Scale Open-Pit Copper Mines". *International Journal of Engineering*, 38(4), 830-847. [doi: 10.5829/ije.2025.38.04a.14](https://doi.org/10.5829/ije.2025.38.04a.14)
2. Heydari, M., Osanloo, M., (2024), "Untangling the complex web of environmental, social, and economic impacts in deep and large-scale open-pit mining projects using a dynamic modeling framework". *Journal of Resources Policy (Impact factor: 10.2, CiteScore: 13.4)*, Vol. 90, <https://doi.org/10.1016/j.resourpol.2024.104690>.
3. Heydari, M., Osanloo, M. (2024). "A New Comprehensive Model for Integrating Environmental, Economic, and Social Performance of Deep and Large-scale Open-Pit Copper Mines", *International Journal of Engineering (Transaction A)*, Vol 37(1), pp. 1-13. [doi: 10.5829/ije.2024.37.01a.01](https://doi.org/10.5829/ije.2024.37.01a.01)
4. Heydari, M., & Osanloo, M. (2024). "A new model for the economic impact assessment of large-scale and deep open-pit mines". *International Journal of Mining, Reclamation and Environment*, (Impact Factor: 2.8, CiteScore: 5,7), Vol 38(1), 1–26. <https://doi.org/10.1080/17480930.2023.2243175>
5. Heydari, M., Osanloo, M., & Başçetin, A. (2023). "Developing a new social impact assessment model for deep open-pit mines". *Journal of Resources Policy (Impact factor: 10.2, CiteScore: 13.4)*, 82, 103485. <https://doi.org/10.1016/j.resourpol.2023.103485>
6. Heydari, M., and Osanloo, M., (2022) "Future of Mining Careers "Bolour Quarterly, Mining Engineering Scientific Journal, Vol 44, pp 1-15, (In Persian) www.bolourjournal.ir
7. Heydari, M., Osanloo, M., (2022). "Proposing a Dynamic Mining Sustainability Assessment Method (MSAM) for Deep Open-Pit Copper Mines". *International Journal of Research in Science and Technology*, pp: 10, 1-8. <https://ijrstjournal.com/pdf/ijrst-volume-10-issue-1-january-march-2023-1-8.pdf>
8. Heydari, M., and Osanloo, M., (2019) "Evaluation of sustainable development of Iranian Angouran lead and zinc mining complex by DEMATEL method", *Bolour Quarterly, Mining Engineering Scientific Journal*, Vol 42, pp 47-55, (In Persian) www.bolourjournal.ir
9. Khavari, P., Heidari, M., (2016), "Numerical and Experimental Studies on the Effect of Loading Angle on the Validity of the FBD Method," *Journal of Geology and Mining Research*, Vol. 8(1), pp. 1-12, DOI: [10.5897/JGMR15.0243](https://doi.org/10.5897/JGMR15.0243)

Conference Publications:

10. Heydari, M., Osanloo, M., (2024). "What Are the Most Influential Factors in Conducting a Sustainability Assessment of Deep and Large-Scale Open-Pit Mines?", 2024 SME Annual Conference & Expo, February 25-28, 2024, Phoenix, Arizona., published. <http://www.smeannualconference.com/>
11. Shahbakhsh, H., Osanloo, M., Heydari, M., (2024). "Hybrid Renewable and Non-renewable Energy Sources for GHG Reduction: Sangan Mining Complex, Iran"., Minexcellence2024, 9th International Conference on Operational Excellence in Mining, Santiago, Chile. Paper accepted to be presented and published. https://gecamin.com/ce/24mnx_received_abstracts.pdf
12. Heydari, M., Osanloo, M., (2023). "The Principal Step in a Comprehensive Sustainability Assessment of Mining Projects", IMCET Congress, Antalya, Turkey, published. <http://www.imcet.org.tr/>
13. Soleimani, M., Osanloo, M., Heydari, M., Katibeh, H., (2022), "Digital twins concept in mining industry: challenges and opportunities", Minexcellence2022, 7th International Conference on Operational Excellence in Mining, Santiago, Chile, (Orally presented by me), pp:288-293. <https://www.gecaminpublications.com/minexcellence-2022/?noreload=1>

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14. Heydari, M., Osanloo, M., Başçetin, A., (2022), "*Environmental impact assessment footprint in open-pit copper mining*", IMCET Congress, Antalya, Turkey, (Orally presented by me), pp: 335-346. <http://www.imcet.org.tr/>
15. Heydari, M., Osanloo, M., Başçetin, A., (2022), "*Life cycle assessment in deep open-pit copper mines*", IMCET Congress, Antalya, Turkey, (Orally presented by me), pp:558-573. <http://www.imcet.org.tr/>
16. Heydari, M., and Osanloo, M., (2019), "*An overview of environmental impact assessment (EIA) and life cycle assessment (LCA) methods in mining projects*", Second National Conference on Data Mining in Earth Sciences, Arak, Iran, (Orally Presented by me), (In Persian). <https://civilica.com/doc/1422799/>
17. Heydari, M., and Osanloo, M., Akbari, M., (2019) "*A review of Environmental Impact Assessment of copper mines: a statistical survey*", The 2nd Iranian Conference of Green Mining & Mine Industry, (In Persian), <http://icgmmi98.znu.ac.ir/> <https://civilica.com/doc/978756/>
18. Heidari, M., and Osanloo, M., (2018) "*Sustainability Assessment of Angouran Lead and Zinc Mining Complex.*" In International Symposium on Mine Planning and Equipment Selection—MPES 2018, p. 523. https://doi.org/10.1007/978-3-319-99220-4_44
19. Heydari, M., and Osanloo, M., (2018) "*An Analysis of the Iron Ore Market in the World in 2030*", The 5th Annual International Iron Ore Conference of Iran, (In Persian), www.iropex.com
20. Heydari, M., and Osanloo, M., (2018) "*The role of mining in the development of industries and the modernization of societies in the years ahead*", The 1st Iranian Conference of Green Mining and Mine Industries, (In Persian), <http://conf.isc.gov.ir/icgmmi97>
21. Zarei, H., Saffari, M., Abdi, M., Heydari, M., (2015), "*Study on the Effects of Present Ions in Lead Sulfate Halide Leaching Process from Residual Cake of Zinc Leaching Plant of Iranian National Lead & Zinc Co.*", Lead-Zinc Symposium of GDMB Society of Metallurgists and Miners, Düsseldorf, Germany, 2015

Languages:

English	Professional working proficiency (IELTS 7.5)
Persian (Farsi)	Native
Turkish	Limited working proficiently

Online Courses and Certificates Related to Sustainability:

- SUSTAINABLE DEVELOPMENT APPROACHES IN ENGINEERING RESEARCH AND EDUCATION
Organized and hosted by the International Competence Centre for Mining-Engineering Education under the auspices of UNESCO / Austrian branch at Montan Universität Leoben, Austria
Course duration: weekly from 9 April - 24 June 2021, 90 minutes per installment, 14 lectures in total
- INTRODUCTION OF LIFE CYCLE ASSESSMENT (LCA) AND OPENLCA
HELD BY: AUT's Office of Sustainability at Amirkabir University of Technology (Tehran Polytechnic), Tehran-Iran, 10th & 11th of July 2021

Honors:

Top GPA among classmates in Ph.D. and Master of Mining Engineering

Ranked 6 among More Than 1,000 Participants in Governmental Universities' Entrance Exam for the Ph.D. Program-Mining Engineering, May 2017

Ranked 1 among More Than 5,000 Participants in the Islamic Azad Universities' Entrance Exam for Ph.D. Program-Mining Engineering, May 2015

Ranked 5 among More Than 5,000 Participants in Governmental Universities' Entrance Exam for M.Sc. program-Mining Engineering, May 2011

Membership:

- Member of SME (Society for Mining, Metallurgy & Exploration) in USA
- Member of the Iranian Mining Engineering Organization (IMEO). Membership No: 71862
- Member of the Iranian Society of Mining Engineering (IR-SME).

Extracurricular Activities:

Sports:

Professional Swimmer

Art:

Expert Santour (Persian instrument), Guitar, and Piano Player

References:

Prof. Dr. Jonathan Cullen, Cambridge university, jmc99@cam.ac.uk

Prof. Dr. Morteza Osanloo, Ph.D, Amirkabir University of Technology, osanloo@aut.ac.ir

Prof. Dr. Atac Bascetin, Ph.D, Istanbul Technical University, atac@istanbul.edu.tr