PENGBO CHU

Assistant Professor
Department of Earth and Environmental Engineering
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Research Interest

Critical minerals/materials; sustainable resource extraction from primary and secondary resources; space mining; innovation in engineering education

Education

2012-2017	Ph.D. in Materials Engineering Faculty advisor: Jim Finch.	McGill University, Montreal, QC.
2010-2012	M.Eng. in Mechanical Engineering Faculty advisor: Peter Radziszewski.	McGill University, Montreal, QC.
2003-2009	B.Eng. in Mechanical Engineering	McGill University, Montreal, QC.

Employment

2026-present	Assistant Professor, Department of Earth and Environmental Engineering, Columbia University, New York City, NY.
2025-2025	Nevada Gold Mines Professor and Associate Professor of Metallurgical Engineering, University of Nevada, Reno, Reno, NV.
2021-2025	Nevada Gold Mines Professor and Assistant Professor of Metallurgical Engineering, University of Nevada, Reno, Reno, NV.
2020-2021	Assistant Professor of Metallurgical Engineering, University of Nevada, Reno, Reno, NV.
2017-2019	Postdoctoral Scientist, CanmetMINING, Natural Resources Canada, Ottawa, ON.
2012-2017	Graduate Research and Teaching Assistant, Materials Engineering, McGill University, Montreal, QC.
2010-2011	Research Assistant, Norcast Wear Solutions, Toronto, ON.
2006-2006	Research Assistant, Novelis Global Technology Center, Kingston, ON.

Awards

2025	Jason Geddes Regents' Rising Researchers Award, Board of Regents, Nevada Systems of Higher Education
2025	Excellent Contribution Award, Editorial office of Green and Smart Mining Engineering
2024	Mousel-Feltner Award for Excellence in Research and/or Creative Activity, College of Science, University of Nevada, Reno

2024	Nevada's Center for Entrepreneurship and Technology Sustainability Leader of the Year Award
2014	Doctoral Award, Fonds de recherche du Québec Nature et Technologies
2013	Fellow of Brace Water Resources Foundation, McGill University
2012	MEDA Doctoral Award, McGill University, 2012
2011	International SAG Conference Postgraduate Award, SAG Conference, 2011
2010	BMP Industrial Innovation Scholarship, Natural Sciences and Engineering Research Council of Canada

Peer Reviewed Journal Publications (* indicates sole corresponding author, ^ indicates co-corresponding author, underline indicates author a primary advisee of Chu)

37. Arthur, S.E., Mends, E.A., Gargiulo, M., Muthoni, F., Hussaini, S., Chu, P.*, 2026a. Improving lithium extraction from claystone: Maximizing efficiency and sustainability with integrated beneficiation and sulfuric acid leaching. *Journal of Cleaner Production* 538, 147332. https://doi.org/10.1016/j.jclepro.2025.147332
36. Arthur, S.E., Mends, E.A., Gargiulo, M., Smith, Y.R., Chu, P.*, 2026b. Dense Media Separation for Mineral Carbonation and Enhanced Rare Earth Mineral Recovery. *ACS Sustainable Resources Management*. XXX–XXX. https://doi.org/10.1021/acssusresmgt.5c00489
35. Mends, E.A., Chu, P.*, 2025. Radionuclide Removal in Rare Earth Mineral Processing: A Review of Existing Methods and Emerging Biochemical Approaches Using Siderophores. *Minerals* 15, 1308. https://doi.org/10.3390/min15121308
34. Mitchell, K., Shackleford, A., Arthur, S., Zhang, C., Lim, E., Juarez, K., Bandala, E., Hensley, D.K., Chen, J., Su, J., Cui, H., Osho, B.O., Wang, X., Highmoore, J., Yang, Y., Wang, Y.^, Chu, P.^, Zhang, J.^, Chai, G.^, Jin, Y.^, 2025. Molten Embedded Writing of End-Use Thermoplastics for Engineering Applications. *ACS Applied Material Interfaces* 17, 68417–68430. https://doi.org/10.1021/acsami.5c16456
33. Kar, U. and Chu, P*. Challenges and Innovations With Spent Battery Sorting. *Advanced Sustainable Systems*, n/a(n/a), e00488. https://doi.org/10.1002/adsu.202500488
32. Kar, U., Fahimi, A., Suponik, T., Kaya, M., & Chu, P.* (2025). Comparison of different pretreatment processes for lithium-ion battery recycling from a life cycle assessment perspective. *Journal of Environmental Management*, 392, 126798. https://doi.org/10.1016/j.jenvman.2025.126798
31. Jaramillo, R., Jin, J.*, Wang, X., Chu, P. and Zahn R. (2025). Characterization of induced cracks in silicate and calcite gangue minerals from crushed rare earth ores using 2d and 3d methods prior to carbonation reactions. *Mining, Metallurgy & Exploration*. https://doi.org/10.1007/s42461-025-01325-x.
30. Tita, A. M., Mends, E. A., Kar, U., Hussaini, S., and Chu, P.* (2025). Leaching of Li-bearing sedimentary claystones using organic acids. *Green and Smart Mining Engineering*, 2(2), 156-167. https://doi.org/10.1016/j.gsme.2025.06.002
29. Arthur, S. E., Mends, E. A., Tita, A. M., and Chu, P.* (2025). The development of a beneficiation process to remove carbonates from lithium sedimentary claystones. *Cleaner Engineering and Technology*, 26, 100949. https://doi.org/10.1016/j.clet.2025.100949.
28. Nili, S., Thella, J. S., Sharifian, S., Chu, P., Vasquez, V. R., and Vahidi, E.* (2025). Economic viability and environmental impact: A dual approach to sustainable REE production from bastnasite

using a density-based sorting machine. *Science of The Total Environment*, 983, 179696. https://doi.org/10.1016/j.scitotenv.2025.179696.

27. Raymond, L., Bond, L., Thella, J. S., Thella, C., Chu, P.^, and Jin, Y.^ (2025). Digital Light Processing of Microfluidic Chips for Cell Separation. *Journal of Micro and Nano Science and Engineering*, 1-31. https://doi:10.1115/1.4068737
26. Mends, E. A., Arthur, S. E., Hussaini, S., Thella, J. S., and Chu, P.* (2025). Investigating the selective extraction of metals from nickel sulfide tailings using salt roasting and acid leaching. *Minerals Engineering*, 231, 109433. https://doi.org/10.1016/j.mineng.2025.109433.
25. Bandala, E., Raymond, L., Mitchell, K., Rubbi, F., Thella, J., Osho, B. O., Kushwaha, A., Elahifad, M., Su, J., Zhang, X., Menezes, P.^, Wang, X.^, Chu, P.^, and Jin, Y. ^(2025). Distance-controlled direct ink writing of titanium alloy with enhanced shape diversity and controllable porosity. *npj Advanced Manufacturing*, 2(1), 4. http://doi:10.1038/s44334-025-00016-1
24. Kar, U., Nili, S., Mends, E., Vahidi, E., and Chu, P.* (2025). A review and environmental impact analysis on the current state of froth flotation on recycling of e-wastes. *Resources, Conservation and Recycling* 212, 107967. https://doi.org/10.1016/j.resconrec.2024.107967.
23. Maleki, E., Chen, L.-T.*, Vijayakumar, T. M., Asumah, H., Tretheway, P., Liu, L., Fu, Y. and Chu, P. (2024). AI-generated and YouTube videos on navigating the U.S. healthcare systems: evaluation and reflection. *International Journal of Technology in Teaching and Learning*, 20(1), 40-72.
22. Manka Tita, A., Atta Mends, E., Hussaini, S., Thella, J., Smith, Y., and Chu, P.* (2024). Beneficiation of Li-bearing sedimentary claystone by centrifugation. *Minerals Engineering* 218, 109042. https://doi.org/10.1016/j.mineng.2024.109042.
21. Claassen, M., Bingham, B., Chow, J.C., Watson, J.G., Chu, P., Wang, Y., and Wang, X.* (2024). Characterization of Lithium-Ion Battery Fire Emissions—Part 2: Particle Size Distributions and Emission Factors. *Batteries* 10, 366.
20. Mends, E.A., Arthur, S.E., Tita, A.M., Hussaini, S., and Chu, P.* (2024). Valuable Metal Recovery from Nickel Sulfide Flotation Tailings via Chloride-Based Acid Leaching. *Journal of Sustainable Metallurgy.* http://doi.org/10.1007/s40831-024-00926-y.
19. Mends, E.A., Arthur, S.E., Tita, A.M., Hussaini, S., Osho, B., Timilsina, A., Basyal, S., Yang, Y., and Chu, P.* (2025). Leaching nickel sulfide tailings with activated carbon in sulfuric acid medium. *Separation and Purification Technology* 353, 128520. https://doi.org/10.1016/j.seppur.2024.128520.
18. Atta Mends, E., Manka Tita, A., Hussaini, S., Samuel Thella, J., Pan, L., and Chu, P.* (2024). Investigation of leaching of nickel sulfide flotation tailings to recover valuable metals. *Minerals Engineering* 212, 108716. https://doi.org/10.1016/j.mineng.2024.108716.
17. Thella, J., McNew, E., Emmanuel, M., Thella, C., and Chu, P.* (2024). A Laboratory Study to Simulate Ore Sorting for a Rare Earth Ore. *Mining, Metallurgy & Exploration* 41, 1909-1918. https://doi.org/10.1007/s42461-024-01016-z.
16. Kafil, V., Sreenan, B., Hadj-Nacer, M., Wang, Y., Yoon, J., Greiner, M., Chu, P., Wang, X., Fadali, M.S., and Zhu, X.* (2024). Review of noble metal and metal-oxide-semiconductor based chemiresistive hydrogen sensors. *Sensors and Actuators A: Physical* 373, 115440. https://doi.org/10.1016/j.sna.2024.115440.
15. Hussaini, S., Tita, A.M., Kursunoglu, S., Kaya, M., and Chu, P.* (2024). Leaching of Nickel and Cobalt from a Mixed Nickel-Cobalt Hydroxide Precipitate Using Organic Acids. *Minerals* 14, 314. https://doi.org/10.3390/min14030314.

14. Penaloza, I., Tita, A., McNew, E., and Chu, P.* (2023). Barite resources, production and recovery using froth flotation: A review. *Minerals Engineering* 203, 108327. https://doi.org/10.1016/j.mineng.2023.108327.
13. Mends, E.A., and Chu, P.* (2023). Lithium extraction from unconventional aqueous resources – A review on recent technological development for seawater and geothermal brines. *Journal of Environmental Chemical Engineering* 11, 110710. https://doi.org/10.1016/j.jece.2023.110710.
12. Mitchell, K., Urade, S., Kershaw, A., Chu, P.^, and Jin, Y.^ (2023). 3D printing of conical centrifuge system for mineral particle separation. *Separation and Purification Technology* 306, 122567. https://doi.org/10.1016/j.seppur.2022.122567.
11. Chen, L.-T., Liu, L., Urade, S., and Chu, P.* (2023). An Industry Perspective on the Current US Metal Mining Engineering Education. *Mining, Metallurgy & Exploration* 40, 1041-1058. https://doi.org/10.1007/s42461-023-00782-6.
10. Kökkılıç, O., Mohammadi-Jam, S., Chu, P., Marion, C., Yang, Y., and Waters, K.E.* (2022). Separation of plastic wastes using froth flotation – An overview. *Advances in Colloid and Interface Science* 308, 102769. https://doi.org/10.1016/j.cis.2022.102769.
9. Chu, P.*, Li, R., Lepage, M., and Waters, K. (2022). Investigation of the Effect of Electrolytes on the Breakaway of Air Bubbles at an Underwater Capillary Using High-Speed Cinematography and Passive Acoustic Techniques. *Minerals* 12, 972. https://doi.org/10.3390/min12080972.
8. Chu, P.*, Finch, J., Bournival, G., Ata, S., Hamlett, C., and Pugh, R.J. (2019). A review of bubble break-up. *Advances in Colloid and Interface Science* 270, 108-122. https://doi.org/10.1016/j.cis.2019.05.010.
7. Marion, C., Grammatikopoulos, T., Rudinsky, S., Langlois, R., Williams, H., Chu, P., Awais, M., Gauvin, R., Rowson, N.A., and Waters, K.E.* (2018). A mineralogical investigation into the pre-concentration of the Nechalacho deposit by gravity separation. *Minerals Engineering* 121, 1-13. https://doi.org/10.1016/j.mineng.2018.02.008.
6. Chu, P.*, Pax, R., Li, R., Langlois, R., and Finch, J.A. (2017). Using Sound To Study the Effect of Frothers on the Breakaway of Air Bubbles at an Underwater Capillary. *Langmuir* 33, 3200-3207. https://doi.org/10.1021/acs.langmuir.7b00114.
5. Chu, P.*, Waters, K.E., and Finch, J.A. (2017). Break-up in formation of small bubbles: an energy consideration. *Canadian Metallurgical Quarterly* 56, 30-34. https://doi.org/10.1080/00084433.2016.1245255.
4. Chu, P.*, Waters, K.E., and Finch, J.A. (2016). Break-up in formation of small bubbles: Comparison between low and high frother concentrations. *Minerals Engineering* 96-97, 15-19. https://doi.org/10.1016/j.mineng.2016.06.002.
3. Chu, P.*, Waters, K.E., and Finch, J.A. (2016). Break-up in formation of small bubbles: Break-up in a confined volume. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 503, 88-93. https://doi.org/10.1016/j.colsurfa.2016.05.037.
2. Chu, P.*, Mirnezami, M., and Finch, J.A. (2014). Quantifying particle pick-up at a pendant bubble: A study of non-hydrophobic particle–bubble interaction. *Minerals Engineering* 55, 162-164. https://doi.org/10.1016/j.mineng.2013.10.009.
1. Malas, K.W., Jordens, A., Mirnezami, M., Chu, P., Gauvin, R., and Waters, K.E.* (2013). Surface characterization of fergusonite. *Canadian Metallurgical Quarterly* 52, 278-284. https://doi.org/10.1179/1879139513Y.0000000078.

Peer Reviewed Conference Proceedings (* indicates sole corresponding author, ^ indicates co-corresponding author, underline indicates author a primary advisee of Chu)

21. Scully, V. Le, L., Rowell, B., Jarvis, N., Zechter, H., Chu, P., Harris, F., Dascalu, S.*, 2025. "Fulcrum: A User Study Support Approach for HCI Research Studies", in: 2025 IEEE/ACIS 29th International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD). Presented at the 2025 IEEE/ACIS 29th International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD), pp. 260–265. https://doi.org/10.1109/SNPD65828.2025.11253251
20. Manouchehri, R., Scully, L., Zaremehrjardi, A., Kar, U., Chu, P., Harris, F.C., and Dascalu, S.*, "Evaluating the Impact of Interaction Level on Content Learning in the Eureka VR Environment for Mining Engineering Education", in Symposium on Electronic Imaging, 2025, pp 165-1 - 165-6. https://doi.org/10.2352/EI.2025.37.13.ERVR-165.
19. Scully, L., Cerna, J., Chu, P., Harris, F. C., and Dascalu, S. M., "ScryVR: A Systematic Framework for Accelerating Experimental Research in VR" in Electronic Imaging, 2025, pp 168-1 - 168-6, https://doi.org/10.2352/EI.2025.37.13.ERVR-168.
18. Suponik, T.*, Friebe, P., Kar, U., Franke, D., and Chu, P., "Financial and technological potential of eco-efficient recycling of waste electronic equipment", in Proceedings of XVI International Mineral Processing and Recycling Conference, May 28 - 30, 2025, pp. 665-673, Belgrade, Serbia. https://doi.org/10.5937/IMPRC25665S.
17. Raymond, L., Bond, L., Thella, J., Thella, C., Chu, P.^ and Jin Y.^ (2025), Digital Light Processing of Microfluidic Chips for Cell Separation, ASME 2025 20th International Manufacturing Science and Engineering Conference, June 23–27, 2025, Greenville, South Carolina, USA, accepted.
16. Mends, E. A., Arthur, S. E., Hussaini, S., Thella, J. S. and Chu, P.*, "Investigating the selective extraction of metals from nickel sulfide tailings using salt roasting and acid leaching", in Proceedings of Critical Minerals '24, Nov 14 – 15, 2024, Cape Town, South Africa.
15. Mends, E. A., Tita, A. M., Hussaini, S., Thella, J. S. and Chu, P.*, "Nickel recovery from nickel sulfide tailings using activated carbon in acidic medium", in Proceedings of XXXI IMPC-International Mineral Processing Congress, Sept 29 – Oct 3, 2024, Energy Minerals, pp. 3298 - 3313, Washington D.C., USA.
14. Tita, A., Mends, E., Hussaini, S., and Chu, P.*, "Organic Acid Leaching of a Lithium-Bearing Nevada Claystone", in the Proceedings of the XXXI IMPC-International Mineral Processing Congress, Sept 29 – Oct 3, 2024, Washington, DC., USA.
13. Arthur, S., Mends., E., Tita, A., Hussaini, S., Chu, P* (2024), Recovery of Nickel and Copper from Nickel Sulfide Flotation Tailings: Optimization of Effective Parameters, accepted in Proceeding of XXXI IMPC-International Mineral Processing Congress, Sept 29 – Oct 3, 2024, Washington D.C., USA.
12. Thella, J., McNew, E., Emmanuel, E., Thella, C., Hasenohri, W., and Chu, P* (2024), Novel Method to Simulate Sorting for Eco-Efficient Processing of Rare Earths Ore, accepted in Proceeding of XXXI IMPC-International Mineral Processing Congress, Sept 29 – Oct 3, 2024, Washington D.C., USA.
11. Tita, A., Mends, E., Hussaini, S., and Chu, P.*, "Sulfuric Acid Leaching of Lithium-Bearing Claystones: Identification of Influencing Factors and Optimization of Lithium Extraction Using DOE", in the Proceedings of MINEXCHANGE 2024 SME Annual Conference & Expo, Feb 25-28, 2024, Arizona, USA.

10. Tita, A., Mends, E., and Chu, P.*, "Silt-Clay Separation Through Centrifugation, for Effective Clay Characterization and Subsequent Lithium Enrichment", in the Proceedings of MINEXCHANGE 2024 SME Annual Conference & Expo, Feb 25-28, 2024, Arizona, USA.
9. Chu, P.* and Chen, L.T., (2024), Understanding the Industry Perspective on the Current U.S. Hardrock Mining Engineering Education, XXXI IMPC-International Mineral Processing Congress, Sept 29 – Oct 3, 2024, Washington D.C., USA.
8. Tita, A., and Chu, P.*, Sequential Leaching of Nevada Sedimentary Claystones for Subsequent Selective Lithium Extraction, in the Proceedings of the 9th International Symposium on Hydrometallurgy, August 27-30, 2023, Phoenix, AZ, USA.
7. Wilson, M., Scully, L., Le, V., Harris, F.C., Jr., Chu, P., and Dascalu, S.* (2024). Options Matter: Exploring VR Input Fatigue Reduction, accepted at the 2024 International Conference on Information Technology New Generations (ITNG-2024), Las Vegas, NV, April 2024. Springer, 6 pages.
6. Zaremehrjardi, A., Scully, L., Manouchehri, R., Chi, J., Chu, P., and Dascalu, S.* (2024). Introductory Pathway to Virtual Reality by Developing Immersive Games of Skill, accepted at the 2024 International Conference on Information Technology New Generations (ITNG-2024), Las Vegas, NV, April 2024. Springer, 6 pages.
5. Liu, L., Chen, L., Dascalu, S., Yang, Y., and Chu, P*. (2024). Design and Production of 360º Instructional Video for Mining Engineering Education. In J. Cohen & G. Solano (Eds.), Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 1175-1180). Las Vegas, Nevada, United States: Association for the Advancement of Computing in Education (AACE).
4. Chu, P.*, Li, R., Pax R., and Finch, J.A., Investigation of the possibility of using acoustic technique to determine bubble size in an inclined cell. XXVIII International Mineral Processing Congress Proceeding, Quebec City, September 11-15, 2016.
3. Chu, P.*, Waters, K.E. and Finch, J.A., The effect of high and low frother concentrations on bubble formation through break-up. Flotation 15, Cape Town, November 16-19, 2015.
2. Chu, P.* and Finch, J.A., Break-up in formation of small bubbles: Salts and frothers. XXVII International Mineral Processing Congress Proceeding, Santiago, Chile, October 20-24, 2014.
1. Chu, P.* and Finch, J.A., Frother and break-up in small bubble formation. Conference of Metallurgist Proceeding, Montreal, October 27-31, 2013.

Invited Presentations

6. Using Activated Carbon Assisted Hydrometallurgical Approach to Recover Nickel from a Mine Tailing. Cambridge EnerTech -ALTA Americas, Las Vegas, Nevada, USA, Dec 9-11, 2025.
5. Flotation Physics. Freeport McMoran – 2025 FMI Flotation Seminar, Tucson, Arizona, Oct 20-24, 2025.
4. Mineral Processing of Sedimentary Lithium Claystones. Lawerence Berkeley National Lab – 2025 Subsurface Science Collaboration Meeting, Berkeley, California, USA, Aug 15, 2025.
3. Opportunities and Challenges in Processing Lithium Sedimentary Claystones, Dessert Research Institute, Reno, Nevada, USA, April 2024.
2. Nevada – Transition from a Silver State to a Lithium State. Northern Nevada Newcomer Association, Reno, Nevada, USA, May 2022.

1. Mineral Processing of Low-Grade Rare Earth Ores. Michigan Technological University, Department of Chemical Engineering, Houghton, MI, USA, Mar. 2021.

Patents

- U.S. Patent Application 19/085, 913, "Method and System for Removing Gangue Compounds from Lithium-Containing Materials," filed March 20, 2025, Patent Pending.
- U.S. Patent Application 19/242, 201, "Methods for Leaching Mining Tailings," filed June 18, 2025, Patent Pending.

Teaching

- Mineral processing related courses

Professional Membership and Service

Journal Related:

- Peer reviewers:
    - Science
    - ACS Sustainable Chemistry & Engineering
    - Separation and Purification Technology
    - ACS Environmental Science & Technology
    - Minerals Engineering
    - ChemSusChem
    - Minerals
    - Natural Resources Research
    - Physicochemical Problems of Mineral Processing
    - Resources
    - Mining, Metallurgy & Exploration
    - Sustainability
    - Applied Science
    - International Journal of Environmental Research and Public Health
    - Critical Reviews in Environmental Science and Technology
    - Mineral Processing and Extractive Metallurgy Review
- Editorial Board Member, Green and Smart Mining Engineering
- Associate Editor, Journal of Mining, Metallurgy & Exploration
- Co-editor, Minerals
- Guest-editor, Journal of Sustainable Materials
- Guest Editor for Journal of Sustainable Materials

Grant /Award Review:

- Grant Reviewer for Army Research Office, National Science Foundation, Department of Energy, South Dakota Board of Reagent, Canadian National Science and Engineering Research Council, Canadian Mitacs Accelerate Research
- SME Taggart Award Review Committee, 2024-2026.

Conferences:

- Member of Society for Mining, Metallurgy and Exploration (SME)
- Session Chair for 2024 International Mineral Processing Congress – Flotation Chemistry
- Session Chair/Co-Chair for 2024 SME conference –Flotation fundamentals
- Session Chair/Co-Chair for 2023 SME conference – MPD Physical Separation; MPD Flotation of Secondary Resources
- Session Co-Chair for 2022 SME Conference - Gas Interactions and Methane Management Technical Session
- Judge for 2021 and 2022 SME student poster competition
- Mineral Processing Division Representative for SME Information Publishing Committee
- 28th International Mineral Processing Congress, Flotation Plant Design, Co-Chair

Student Advising

Postdoc Fellow:

Current Students:

1. Umut Karr (Ph.D. Minerals Resources Engineering)

Former Students:

1. Dr. Angela Tita (Ph.D. Minerals Resources Engineering), Spring 2026. SME MPD Division Outstanding Graduate Scholarship, Gerald V. Henderson Memorial Scholarship, Raja V. & Geetha V. Ramani Graduate Students Award, Research Metallurgist at American Battery Technology Company
2. Dr. Emmanuel Mends (Ph.D. Minerals Resources Engineering), Spring 2026, Postdoctoral fellow at PNNL
3. Dr. Shokrullah Hossaini (Postdoctoral fellow), Jul 2023 – Dec 2025, Hyrometallurgist, Austin Elements
4. Ephraim Teye (Ph.D. Education)
5. Sabinus Arthur (M.S. Metallurgical Engineering), Metallurgist at Freeport, Spring 2026
6. Andrew Fish (M.S. Metallurgical Engineering), Metallurgist at Freeport, Fall 2025
7. Nathan Merkle (Undergraduate Chemical Engineering), May 2025
8. Michael Gargiulo (Undergraduate Metallurgical Engineering), Metallurgist at MP Materials, Fall 2025

9. Dr. John Thella (Postdoctoral fellow), Feb 2023 – Dec 2024
10. Isabel Penaloza (M.S., Metallurgical Engineering), SME MPD Division Outstanding Graduate Scholarship, Gerald V. Henderson Memorial Scholarship, Raja V. & Geetha V. Ramani Graduate Students Award, Advisor Water at Rio Tinto, 2023
11. Sachin Urade (M.S., Metallurgical Engineering), Metallurgist at Nevada Gold Mines, 2023
12. Andrew Kershaw (B.S., Mechanical Engineering), Engineer at Boeing 2023
13. Mohammad Karim (B.S., Metallurgical Engineering)
14. Richard Meza (B.S., Microbiology), 2023
15. Simmon Chung (B.S., Metallurgical Engineering), 2022
16. Mahdieh Dianati (Ph.D. Minerals Resources Engineering), 2022
17. Dr. Saeed Ahmadvand (Postdoctoral fellow), 2021
18. Dalen Police (M.S. Metallurgical Engineering), 2021
19. Kenny Fox (NSF EPSCoR Undergraduate Awardee), 2021
20. Addi Quintillano (B.S., Materials Engineering), Idaho National Labs 2021