Break new ground in extraction and processing, improve operations, and turn waste into consumer products.

Research Focus Areas
- Geophysical sensing techniques
- Mineral & chemical characterization
- Mineral processing, geometallurgy & extractive metallurgy
- Rock strength, fracturing & excavation
- Sustainability & development
- Technology & automation

One-of-a Kind Resources
- **Geotechnical Center of Excellence:** multidisciplinary risk mitigation
- **Lowell Institute for Mineral Resources:** globally sustainable practices
- **San Xavier Underground Mining Lab:** industry-level training

Degrees
PhD • MS • ME *(online option)*

Certificates With Online Options
- Mine Production & Information Technology
- Mineral Processing & Extractive Metallurgy
- Mining Occupational Safety & Health
- Rock Mechanics

ARIZONA

No. 1

U.S. copper production
(USGS)

" After a nationwide search for the right program, I chose Mining and Geological Engineering at the UA, and I couldn't be happier. The facilities, resources and staff here at the university gave me the means to tackle my research in ways I never thought possible. "

- Blase LaSala, MS student

Funding options throughout degree lifecycle

Application Deadlines
Fall – *All Programs*
International: April 20
Domestic: July 15
Spring – *ME and Certificates Only*
International online: Nov. 18,
 International on campus w/Visa: Sept. 30
 Domestic: November 18

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▶ ▶ ▶ **mge.engineering.arizona.edu**

COLLEGE OF ENGINEERING
Mining & Geological Engineering

Main Pit

Ore Body
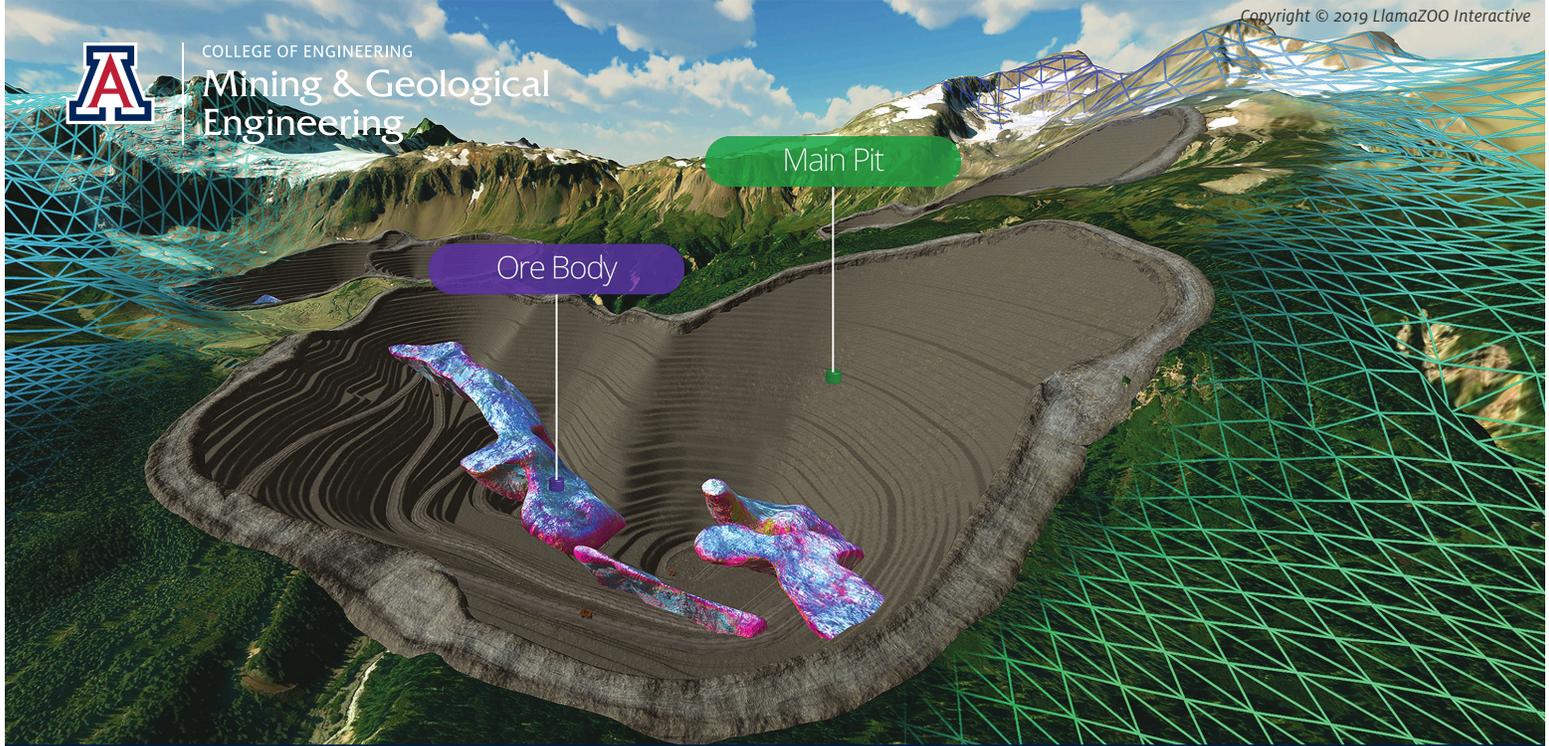
" Between having their own student run mine and strong industry connections, the MGE program at the U of A provided me with the exact right experience in and out of the classroom to exceed in my professional career' "

- Brody Rastall, ME graduate, Staff Engineer, Golder Associates

Faculty Expertise

Angelina Anani – angelinaanani@arizona.edu
modeling and optimization of mining systems, mine planning and production scheduling, design and management of sustainable mining systems, mine equipment reliability studies, tunneling and underground works, energy and water efficiency, application of machine learning in the mining, 3D mining planning, mining supply chain

Isabel Barton – fay1@arizona.edu
geometallurgy • materials characterization • economic geology • geochemistry • extractive metallurgy • mineralogy

Gail Heath – gailheath@arizona.edu
mining reclamation for environmental legacy; earth system behavior, including landfills, waste sites, current and abandoned mining sites, aquifers and volcanoes

Jaeheon Lee – jaeheon@arizona.edu
hydrometallurgy • bioleaching and biooxidation of sulfide materials

Kray Luxbacher – kraylux@arizona.edu
Underground mine ventilation, atmospheric monitoring, ventilation system characterization, mine fire simulation and prevention, and mine risk analysis.

Moe Momayez – moe.momayez@arizona.edu
geomechanics • ground control • slope stability monitoring • geosensing • big data • machine learning • health and safety • ventilation • nondestructive testing • renewable energy

Nathalie Risso – nrisso@arizona.edu
mining automation and operations, automation, machine learning, data mining, process optimization, renewable energy and sustainability

Brad Ross – bjr@arizona.edu
geotechnical engineering, safety, leadership

Ben K. Sternberg – bkslasi@arizona.edu
electrical and electromagnetic methods • integration of geological and geophysical data for mining, petroleum, environmental, water resource and geotechnical applications • imaging and sensing applications

Victor Tenorio – vtenorio@arizona.edu
underground mine design

Muhammad Waqas – waqas@arizona.edu
discrete element modeling, artificial intelligence modeling, mining equipment operations, and geomechanics

Jinhong Zhang – jhzhang@arizona.edu
mineral processing • froth flotation • surface chemistry • water treatment • atomic force microscopy

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