

Graduate Research (Master's, PhD) & Postdoc Opportunities in Green Mining and Geomechanics (GMG) Lab

Location: [School of Resources and Safety Engineering, Chongqing University](#)

PI/Advisor: [Prof. Tuo Chen](#)

Anticipated start date: September 2027 (Master's & PhD); flexible for the Postdoc

Position overview

We are seeking motivated graduate students and a postdoctoral fellow to join Prof. Tuo Chen's group at the School of Resources and Safety Engineering, Chongqing University (CQU), which pursues safe, green, and efficient extraction of deep mineral resources via experiments, numerical simulation, and AI tools. Open positions:

- **Postdoctoral Research Fellow (1):** (a) THM multi-physics coupled modeling; (b) AI for geomechanics engineering; (c) green artificial seismic source (e.g., sparker) for mine geophysical survey. Fully funded with a competitive salary; start date flexible.
- **PhD and Master's candidates (2027 entry):** (a) green rock fracturing using chemical demolition agents and plasma blasting technologies; (b) mechanism and prevention of mechanical hazard (e.g., rockburst, large seismicity) in deep mines (c) geomechanical modelling and rock fracture simulation.

Essential qualifications

- A degree in mining engineering, rock mechanics, civil/geotechnical engineering, geophysics, cement-based materials, or a closely related field — a completed PhD (or near completion) for the postdoc, a Master's degree for PhD applicants, and a Bachelor's degree for Master's applicants.
- **[Postdoc]** hands-on experience in rock fracture testing, THM coupled simulation (e.g., FLAC3D, COMSOL), or deep learning (Python) is strongly preferred.
- **[PhD/Master's]** a solid background in geomechanics, numerical modeling, or experimental work; programming skills are an asset.
- Motivation for industry-relevant mining research and the ability to work in an international team.

Research environment

Chongqing University is a national "985 Project" university and a Type A Double First-Class (world-class) research university in China, with Engineering ranked in the global top 0.01% (ESI) and Mining Engineering ranked 9th worldwide (Shanghai Global Subject Ranking). The GMG Lab is housed within the School of Resources and Safety Engineering, home to the State Key Laboratory of Coal Mine Disaster Dynamics and Control. As part of CQU's world-class research ecosystem, we offer access to state-of-the-art rock-mechanics and mining facilities, high-performance computing resources, and close interdisciplinary collaborations with leading international mining companies.

Prof. Tuo Chen is a principal investigator leading GMG lab at CQU, a national high-level young talent and CQU Hongshen Distinguished Scholar. He received his PhD in mining engineering from McGill University (Canada's leading mining program) and previously work on geomechanics R&D at Vale's North Atlantic operation center, one of the world's leading mining companies. His work has been recognized by awards including the MER Research Award and the CIM Best Poster Award.

Funding package

- **Postdoc:** a competitive, tax-free full-time salary in line with CQU postdoctoral standards, plus research startup support and conference travel funding.
- **Master's & PhD:** the Chinese Government Scholarship (CGS) fully covers tuition and provides a monthly living allowance, on-campus accommodation or a housing allowance, and comprehensive medical insurance. The 2027 intake guides and deadlines will be published at study.cqu.edu.cn.

How to apply

Email Prof. Chen at tuo.chen@cqu.edu.cn, subject “Application – [Position] – [Your Name] – 2027”, with a CV (incl. publication list) and a cover/research plan. Shortlisted applicants will be interviewed; review is rolling until the positions are filled.



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