

SAMIR DEYAB, PhD. Eng, M.Eng, B.Eng.

Tajura

▪ Tripoli, Libya
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▪ 0942526567

SELECT CORE QUALIFICATIONS

- Advanced researcher in mining material engineering with an experience in microwave techniques
- University teaching experience
- Excellent verbal and written communication skills
- Works well independently and as part of a team

CURRENT ROLES

- University Lecturer, Mining Engineering Department, Tripoli University **2023 – Present**
- Member, Preparatory Committee, Second Mining Conference, July 2025, Tripoli, Libya

EDUCATION

Doctor of Philosophy (Mining and Materials Engineering)

2018 – 2022

Mcgill University: Montreal, QC, Canada

- **Thesis:** "Preliminary investigation on the effects of microwave irradiation on hard rocks: Basis for the development of microwave – Assisted rock breakage technology"
- **GPA:** 3.70
- **Supervisor:** Prof. Ferri Hassani

Master of Engineering (Oil & Gas)

2015 – 2017

Memorial University: St. John's, NL, Canada

- **Thesis:** "Failure Modeling and Analysis of Offshore Process Components"
- **GPA:** 3.75
- **Supervisor:** Prof. F.I. Khan

Bachelor of Engineering (Mining Engineering)

2006 – 2011

Tripoli University: Tripoli, Libya

- **Thesis:** "Exploring mineral ores"
- **GPA:** 3
- **Supervisor:** Prof. A. Alssrat

RESEARCH EXPERIENCE

Doctoral Researcher, McGill University, (Mining and Materials Engineering)

2018 – 2022

- Designed and executed experiments to test the effect of microwave irradiation on the mechanical properties of rock samples (Kimberlite, granite, limestone and basalt)
- Analyzed microwave energy absorption by rock samples
- Performed data analysis using Excel

- Collaborated with postdocs, DeBeers company, and Ph.D. students from The University of British Columbia
- Published 4 Journal articles
- Mentored and trained 2 graduate students
- Mentored and trained 4 undergraduate students

Researcher, Memorial University, (Oil & Gas)

2015 – 2017

- Used a Bayesian-based approach to identify the critical components responsible for a potential offshore accident.
- Mapped a Fault Tree and Event Tree to a Bayesian Network and illustrate the use of a Bayesian Network in the absence of data.
- Published 1 Journal article
- Performed data analysis using EXCEL and MATLAB
- Trained 2 graduate students

WORK EXPERIENCE

Teaching Assistant, McGill University, (Mining and Materials Engineering)

2018 – 2022

- Designed Course Materials including study problems and exams
- Selected as a teaching assistant for principles of rock and soil mass character for undergrad students
- Graded problem sets and exams
- Designed and led weekly lecture review and discussion sections for a group of 30 students
- Invigilated in the final exams

Courses:

- Rock and Soil Mass Character
- Introduction to the Minerals Industry
- Rock Fragmentation
- Stability of Rock Slopes

Teaching Assistant, Memorial University, (Oil & Gas)

2015 – 2017

- Designed Course Materials including study problems and exams
- Graded problems sets and exams
- Invigilated in the final exams
- Worked in a team of 20 to organize and prepare for the international engineering conferences at Memorial University

Courses:

- Safety and Risk Engineering
- Advanced Safety Risk& reliability Modeling

Instructor, Tripoli University, (Mining Engineering Department)

2012–2014

- Worked as a teacher for 2 years in teaching rock mechanics and drilling and blasting
- Helped other professors in teaching their courses such as surface mining and mineral economics
- Graded the problems sets and exams
- Organized some events in the mining department
- Evaluated challenges to facilitate strategy development
- Designed and led weekly lecture review and discussion sections for a group of 10 students

Courses:

- Rock Mechanics
- Mining Economics
- Surface Mining
- Mining Geology
- Stability of Rock Slopes

Fields of Expertise and Research Areas

- Rock Mechanics
- Rock Mechanics Laboratory
- Rock Excavation Analysis
- Application of Microwave in the Mining Industry
- Mining Safety
- Stability of Rock Slopes
- Safety of Offshore Components

Languages

- English
- Arabic

Software Skills

- Microsoft Office Suite®
- geotechnical software (Slide, Dips, Swedge, RocFall, and Phase2/RS2 an asset)
- Bayesian Networks
- Engineering modeling software
- Reliability modeling software
- Python Programming
- MATLAB

Award

- A Ph.D. scholarship from the Department of Mining Engineering, Tripoli University, Libya 2018 –2022
- Student Award for Best Poster in Rock Mechanics 2021
Canadian Institute of Mining Metallurgy and Petroleum (CIM)

Short Course

- Computer Application Diploma, Tripoli University, 2013
- Python workshop, McGill University, 2022
- Mathlap workshop, McGill University, 2022
- Course Surpac Master Class, 2023

Volunteer Activities

- Assisted in organizing the first youth forum of Libyan university graduates. **Feb. 2013**
- Helped to organize international engineering conferences at Centre for Risk, Integrity and Safety Engineering at Memorial University **2016–2017**
- Volunteered as a judge at the Summer Undergraduate Research in Engineering. **Agu. 2021**
- Safety officer at Geomechanics Laboratory at McGill University. **2018–2022**

PUBLICATIONS

- **Deyab, S. M.**, Taleb-Berrouane, M., Khan, F., & Yang, M. (2018). Failure analysis of the offshore process component considering causation dependence. *Process Safety and Environmental Protection*, 113, 220-232.
- **Deyab, S. M.**, Rafezi, H., Hassani, F., Sasmito, A. P., & Kermani, M. (2020). The effect of microwave irradiation on the mechanical properties of kimberlite and limestone. *Selçuk-Teknik Dergisi*, 19(4), 97-109.
- Hassani, F., Rafezi, H., & **Deyab, S. M.** (2020). A review of Explosive-Free Rock Breakage (EFRB) technologies in mining industry. *Selcuk University Journal of Engineering Sciences*, 19(4), 84-96.
- Rafezi, H., **Deyab, S. M.**, Hassani, F., Ghoreishi-Madiseh, S. A., & Micallef, D. (2020). A comparative study of the cooling-rate effect on rock strength reduction after microwave irradiation. *Experimental Results*, 1.
- **Deyab, S. M.**, Rafezi, H., Hassani, F., Kermani, M., & Sasmito, A. P. (2021). Experimental investigation on the effects of microwave irradiation on kimberlite and granite rocks. *Journal of Rock Mechanics and Geotechnical Engineering*, 13(2), 267-274.
- **Deyab, S. M.**, Ahmadihosseini, A., Rafezi, H., Hassani, F., & Sasmito, A. P. (2023). Investigating Microwave Treatment of Rocks Based on Fracture Mechanics Analysis in Mode I Fracture Toughness Test. *Journal of Rock Mechanics and Rock Engineering*, 1–17