

MARK LEPAGE, PH.D.

@ mark@marklepage.ca marklepage.ca
+15149798852 Montréal, QC

EXPERIENCE

Founder - Flotation Metrics

June 2025 – Present Montréal, QC

- Founded Flotation Metrics to improve flotation performance through gas-dispersion diagnostics.
- Develops sensor platforms, automated test systems, and analysis workflows for flotation applications.
- Translates plant and laboratory measurements into practical process recommendations.

Postdoctoral Researcher - Mining and Materials Engineering

Sep 2024 – Present McGill University - Montréal, QC

- Applying gas dispersion research to industrial flotation plants.
- Main research interests included **gas dispersion characterization techniques in flotation**.

Flotation Researcher - Corem

Dec 2021 – Jun 2024 Québec, QC

- Conceptualizing and executing **research projects** in the domain of flotation and mineral processing.
- Applying novel **vision systems** to industrial mineral processing plants.
- Developing novel **gas dispersion sensors** for conducting measurements at industrial flotation plants.

Process Engineer - The Mosaic Company

Sep 2013 – Sep 2014 Colonsay, SK

- Ensured efficient operation of the Mosaic Colonsay potash processing plant with the Process Engineering department.

EDUCATION

Doctor of Philosophy - Mining and Materials Engineering

Sep 2015 - June 2023 McGill University - Montréal, QC

- Thesis topic involved the development of novel sensors for **characterizing the froth zone** in flotation under the supervision of Professor Kristian E. Waters.
- Teaching experience through numerous Teaching Assistant positions.

Bachelor of Engineering - Chemical Engineering with Distinction

Sep 2009 - Apr 2015 University of Saskatchewan - Saskatoon, SK

ADDITIONAL SKILLS

Computer

- Proficient in **Python**, **MATLAB**, and **C++** programming, having developed numerous hardware and software systems.
- Proficient in Microsoft Office Suite (Excel/VBA, Word, PowerPoint).

Prototyping

- Experienced in taking ideas from concept to prototype:
 - 3D modelling (**Fusion360**), 3D printing, electronics design (**KiCAD**).

Advanced Data Analysis

- Proficient in use of databases, **NoSQL** (ex. MongoDB, InfluxDB) and **SQL** (ex. PostgreSQL, MySQL) and analysis of large datasets.
- Application of machine learning techniques (**PyTorch**) ex. image segmentation and anomaly detection in image processing.

ABOUT ME

I specialize in practical **gas-dispersion diagnostics**, measurement tools, and actionable data interpretation for improving **flotation performance**.

RECENT PUBLICATIONS

Lepage, M.R., Visconti, L., Opoku, J., Waters, K.E. **The role of measured froth zone water content in flotation froth stability and entrainment behaviour.** *Canadian Metallurgical Quarterly*, 2025, 1–16.

Opoku, J., Lepage, M.R., Langlois, R., Waters, K.E. **Integrated portable gas dispersion device.** *Canadian Metallurgical Quarterly*, 2024, 1–9.

TECHNICAL SKILLS

Flotation

Mineral processing

Sensor Design

Gas Dispersion

Data Analysis

Numerical Simulations

Machine Learning

3D CAD

Hardware Design

Software Design

Report Writing

Project Management

Python

MATLAB

JavaScript

C++

HTML & CSS

Swift

LaTeX

KiCAD

Fusion360

Excel & VBA

LANGUAGES

English (Native) ●●●●●●●●
French - Oral ●●●●●●●●
French - Written ●●●●●●●●

OTHER INTERESTS

Programming

Electronics

Design

3D Printing

Web Design

Hockey

Team Sports

Music

Travelling

REFERENCES

Available upon request