

Robert Q. Wu

PhD Can.,
G.I.T. (APGO)

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"Developing cohesion between geology and software science for industry professionals and researchers."
<https://youtu.be/rEfyQP5TKuE?t=193>

Next Endeavour

Department funded temporary research position in fibre optic sensing and environmental monitoring industry
Summer 2018

Experience

- **Teaching Assistant at McGill University**
September 2016 - Present
Winter 2017: Hydrogeology
Fall 2017: Natural Disasters
Winter 2017: Environmental Geology
Fall 2016: General Geology for Engineers
- **Department Teaching Assistant Union Representative**
September 2016 - September 2017 (1 year)
- **Research Intern at McGill University: Research, Partnerships & More**
May 2016 - September 2016 (5 months)
I analyze rock aggregate behaviour under induced heat pulses and precipitation. I present software solutions to help determine optimal fibre optic heated distributed temperature sensing (FO-hDTS) parameters to be used in field tests. FO-hDTS systems are useful for monitoring hydrogeological environments and infrastructure by providing in-situ moisture content with significant accuracy and low costs.
- **Seismic Programmer at Natural Resources Canada**
May 2015 - August 2015 (4 months)
Develop and debug programs that processes seismic data on a UNIX platform using Antelope seismic processing libraries.
Remodel existing suite of programs used for seismic event characterization in Python and SQL programming languages.
- **Student Residence Assistant at Carleton University**
August 2014 - April 2015 (9 months)
- **Biogeography Research Assistant at Carleton University**
September 2013 - March 2015 (1 year 7 months)
- **Campus Tour Guide at Carleton University**
September 2013 - December 2013 (4 months)

Education

- **McGill University**
Ph.D. (fast-tracked from MSc.), Hydrogeology, 2016 - Present
Activities and Societies: AGSEM TA Union Representative, Adams Club (Student Union)
- **Carleton University**
B.Sc., Honours Earth Sciences, 2012 - 2016
Activities and Societies: Geologist at Carleton Planetary Robotics Team, Carleton Mentorship Program, Carleton Kayak Club

Conferences

Oral Presentations

- Global Institute for Water Security DTS Meeting
University of Saskatchewan, Saskatoon, Canada - December 1 2017
Active FO-DTS Methods in Water Research
- Research Institute of Mine and Environment (RIME) Lac Tio Project Industry Partner Meeting
Ecole Polytechnique Montreal, Montreal, Canada - December 11 2017
Active fibre optic sensing in soils & aggregates
- Canadian Geophysical Union (CGU) Annual Meeting
Vancouver, Canada - May 28 2017
Monitoring moisture in waste rock with fibre optic distributed temperature sensing
- Brownbag Seminar
McGill University, Montreal, Canada - April 15 2017

- Fibre optic sensing through waste rock
- Research Institute of Mine and Environment (RIME) Lac Tio Industry Partner Meeting
Ecole Polytechnique Montreal, Montreal, Canada - December 8 2016
Active fibre optic distributed temperature sensing of soil moisture

Poster Presentations

- PDAC-SEG Student Minerals Colloquium
Toronto, Canada - March 6 2017
Gas transport in waste rock piles, Diavik Diamond Mine, Northwest Territories

Publications

- **Robert Wu**, Jeffrey Mckenzie, Michel Aubertin, Vincent Martin, & Stefan Broda.
“Using active heated fibre optic distributed temperature sensing to evaluate mine waste engineering design”
Forthcoming, 2018
- Vincent Martin, Bruno Bussière, Benoît Plante, Thomas Pabst, Michel Aubertin, Fernando Medina, Marie-Lin Bréard Lanoix, Adrien Dimech, Julien Dubuc, Bissé Poaty, **Robert Wu**, Jeffrey McKenzie, Stefan Broda, and Dan Chen.
“Controlling water infiltration in waste rock piles: Design, construction, and monitoring of a large-scale in-situ pilot test pile”
GeoOttawa, 2017

Honours and Awards

- **KEGS Foundation Scholarship**
Canadian Exploration Geophysical Society (KEGS)
2017
- **Student Industry Mineral Exploration Workshop (SIMEW) Participant**
Prospectors and Developers Association of Canada (PDAC)
May 2016
The two-week gathering of students, hand-picked from post secondary institutions across the country, to experience the facets of Canadian mineral exploration industry.
- **Deans' Honour List**
Carleton University
2013 - 2015
- **Morley E. Wilson Scholarship**
Carleton University
2013, 2015
- **Carleton Academic Scholarship**
Carleton University
2012
- **W.H. Collins Memorial Scholarship for Earth Sciences**
Carleton University 2012

Volunteer Experience

- **SOAR Student Leadership Conference**
Carleton University
2014 - 2015
- **Alumni Mentors Program**
Carleton University
2015 - Present
- **Student Experience Office Orientation Mentorship Program**
Carleton University
2012 - 2013
- **Residence Volunteer**
Carleton University
2012 - 2013