

Robiah AL WARDAH

Geophysicist · Geospatial Analyst · Drone Technology Specialist

✉ alwardah.s@queensu.ca | 📱 Robiah Al Wardah

Education

UGM (Universitas Gadjah Mada)

Yogyakarta, Indonesia

Bachelor of Science in Geophysics, Master in Geophysics

2010 - 2015, 2016 - 2019

- Bachelor Thesis: Wavelet denoising of Merapi phreatic eruption data from Kaliurang station.
- Master Thesis: Automatic analysis of acoustic signals: use of supervised learning tools with Random Forest algorithm.
- Master degree: in trial double degree with UGA (Université Grenoble Alpes), France.

UGA (Université Grenoble Alpes)

Grenoble, France

Master in Geophysics

2017 - 2018

- Thesis: automatic analysis of environmental signals: the use of supervised learning tools.

Queen's University

Kingston, ON Canada

PhD student in Geological Sciences & Geological Engineering

2021 - present

- Thesis: Rapid Geophysical Sensor Deployment using UAS for Emergency Response.

SFU (Simon Fraser University) - Beedie School of Business

Vancouver, BC Canada

Invention to Innovation (i2I) Skills Training

2021 - 2022

- Program: non-credit training in developing the entrepreneurial mindset for scientists and engineers.

Experience

Esri Canada

Toronto, Canada

Intern - Education and Research

Jun. 2023 - Sep. 2023

- Created resources for K12 and higher education in incorporating drone imagery with ArcGIS Drone2Map, SiteScan for ArcGIS, ArcGIS Pro Image Analyst, and ArcGIS Image (ArcGIS Online) for image analysis.
- Created a "best practices" resource for drone imagery acquisition and summarizing drone operation regulation in Canada.
- Contributed to the "Career Path Series" in introducing GIS in Geology and Geophysics for K12 students.

AXA Climate

Paris, France

Risk Analyst - CAT Modeler

Feb. 2020 - Oct. 2020

- Build internal pricing tools (WebUI application) for earthquake parametric protection by optimizing the earthquake catalogue treatment.
- Supported the underwriters to do the risk & hazard assessment for the earthquake perils.

KLK Group

Riau, Indonesia

GIS (Geographic Information System) Management Trainee

Nov. 2018 - Dec. 2018

- Participated in in-house training program, project assignments (e.g. GIS mapping with UAV/drones) and hand-on estate operations across palm oil estate.

GIPSA-Lab

Grenoble, France

Image-Signal Trainee/Intern

Feb. 2018 - Jul. 2018

- Analyzed data science: automatic analysis of environmental signals (use of supervised learning tools). Continuous analysis of acoustic underwater data (application on fish data).

IRD (Institut de Recherche pour le Développement)

Yogyakarta, Indonesia

Research Assistant

Aug. 2015 - Aug. 2017

- Supported research in Domerapi project. Participated in the deployment of seismic networks around the Opak fault, Yogyakarta.
- Processed Merapi earthquake data for the period of October 2013 - May 2015.
- Established partnership between UGA, IRD and UGM.

Geophysics Lab UGM

Yogyakarta, Indonesia

Field Assistant

Sep. 2014

- Assisted the professors to supervise trainees/students on how to operate Geophysical instruments and Geophysical data acquisition on the field, process the data and how to present the result in between the peers and the public audiences.

PT Elnusa Tbk

Jakarta, Indonesia

Seismic Data Processing Trainee

Dec. 2013

- Processed oil and gas data up to Pre-Stack Time Migration using Geocluster and GMG software.

Geoseismal

Research Assistant

Yogyakarta, Indonesia

Sep. 2013, Mar. 2011 - Oct. 2011

- Processed earthquake data to provide input in seismic hazard assessment in nuclear power plant site study in Bangka (2012).
- Processed and analysed microearthquake data at Rajabasa geothermal field (2011).

Field Experience

Advanced Geophysics

Seeleys Bay, ON Canada

Participant

Nov. 2021

- Geophysical data acquisition using Resistivity and Electromagnetic methods for Wollastonite Skarn at St Lawrence mine deposits, starting from survey design and up to data interpretation.

Pre-Doctoral School

Les Houches, France

Participant

Oct. 2017

- Workshop on Internal Earth, approached from various discipline e.g. geochemistry, geodynamics, seismology and geology.

Non-Seismic Field Workshop

Pacitan, Indonesia

Participant, Assistant

Sep. 2013, Sep. 2014

- Geophysical data acquisition using Gravity, Magnetic, AMT (Audio-Magneto Telluric), Resistivity, IP (Induced Polarization), SP (Self Potential), GPS (Global Positioning System), and VLF (Very Low Frequency) to observe mineralized (mineral deposit) zone around Pacitan.
- 2014 - Assisting the professors to supervise the students on geophysical data acquisition, processing and interpretation using Resistivity method.

Geophysical Field Workshop

Ungaran, Indonesia

Participant

Jun. 2014

- Geophysical Data Acquisition using Gravity, Magnetic, AMT (Audio-Magneto Telluric), Resistivity, IP (Induced Polarization), SP (Self Potential), GPS (Global Positioning System), VLF (Very Low Frequency), Seismic (Passive) to observe geothermal prospect in the area.

Physical Volcanology Field Trip

Kamojang, Indonesia

Participant

Jan. 2014

- Geophysical Data Acquisition using Gravity, Magnetic, (Audio-Magneto Telluric, Resistivity, Subsurface Temperature Measurements, Self Potential, GPS, VLF (Very Low Frequency), Seismic (Passive) to observe geothermal prospect in the area.

Geophysics Expedition

Indonesia

Magnetic Team, Committee

2011, 2012

- 2011 - Cepu, Central Java : Geophysical Data Acquisition using Magnetic to image anomalies in the oil field's subsurface.
- 2012 - Kulon Progo, Central Java : Being the committee enable me to experience all geophysical acquisition methods used (e.g. Gravity, Magnetic, AMT (Audio-Magneto Telluric), Resistivity, IP (Induced Polarization), SP (Self Potential), GPS (Global Positioning System), VLF (Very Low Frequency), Seismic (Passive)).

Mapping Fieldwork

Yogyakarta, Indonesia

Participant

2012

- Acquired spatial data information around UGM campus area using theodolite.
- Sketch the map based on the information obtained, presented and wrote the reports.

Teaching Experience

2023, 2024	Spatial Information Management in the Geosciences - Teacher's Assistant	Queen's University, Canada
2024	Earth Systems Engineering - Senior TA	Queen's University, Canada
2023	The Dynamic Earth - Teacher's Assistant	Queen's University, Canada
2022	Earth Systems Engineering - Teacher's Assistant	Queen's University, Canada
2021-2022, 2024	Environmental Geology & Natural Hazards - Teacher's Assistant	Queen's University, Canada
2014	Geophysical Data Acquisition - Field Assistant	UGM, Indonesia
2012-2013	Basic Physics 1 & 2 - Lab. Assistant	UGM, Indonesia

Awards

2022-2023	Canadian Exploration Geophysical Society Foundation Award	KEGS
2023	Dr. William Pearson Named TAship Award	Queen's University
2022-2023	Society of Exploration Geophysics Foundation/Chevron Scholarship	SEG
2022	Roger and Lorna Smith Named Teacher Assistantship Award	Queen's University
2022-2023	Canadian Society of Exploration Geophysics Foundation Award	CSEG