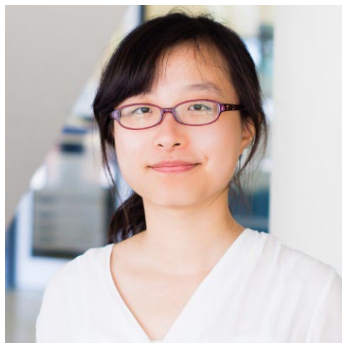


ARIA ZHANG, M.Sc., GIT

JUNIOR HYDROGEOLOGIST/GROUNDWATER MODELER



EDUCATION

M.Sc., Earth Sciences -Water
University of Waterloo, Canada, 2022

B.Sc., Environmental Earth Sciences
University of Alberta, Canada, 2017

PROFESSIONAL REGISTRATION

Geoscientist-in-Training, EGBC

SUMMARY

Aria Zhang has a B.Sc. (Honors) and an M.Sc. in Earth Sciences with specialization in hydrogeology and geochemistry. She has three years of professional experience in environmental site assessment, remediation, and data management, as well as two years of research experience in mine remediation, cover performance evaluation, and numerical modeling of flow and reactive transport. She joined Robertson GeoConsultants Inc. in 2023.

Aria's knowledge and experience includes variably saturated groundwater modeling, reactive transport modeling, site characterization, and groundwater monitoring. She is also experienced in geographic information system, database management, and data analysis, with proficiency in Python, SQL, and ArcGIS.

PROFESSIONAL HISTORY

2023-present: Junior Hydrogeologist/Groundwater Modeler, Robertson GeoConsultants Inc.
2020-2022: Research Assistant, University of Waterloo, Waterloo, ON
2018-2020: Environmental Data Technician, Matrix Solutions Inc., Calgary, AB
2017-2018: Junior Environmental Scientist, Challenger Geophysical, Calgary, AB
2017: Junior Geologist, CEPro Environmental Services, Calgary, AB
2016: Research Assistant, University of Alberta, Edmonton, AB

PROJECT EXPERIENCE

MINE CLOSURE PLANNING

Bouchard-Hebert Mine, Canada (2023-present) for Breakwater Resources Ltd.

- Data review, compilation, analysis, and visualization of site-wide hydrogeology, including borehole logs, cross sections, groundwater flow field, groundwater level time trends, hydraulic testing, recharge, and water balance calculation
- Conceptualization and development of 3-D hydrostratigraphic model in GMS MODFLOW
- Field investigation, well development, hydraulic testing, water level survey, and water quality sampling
- Pumping test and slug test analysis and interpretation with AQTESOLV

Langlois Mine, Canada (2023-present) for Breakwater Resources Ltd.

- Data review, compilation, analysis, and visualization of site-wide hydrogeology, including borehole logs, cross sections, groundwater flow field, groundwater level time trends, hydraulic testing, recharge, and water balance calculations

- Field investigation, well development, water level survey, and water quality sampling

Sandy Flat Mine, NT, Australia (2023-present) for NT Government

- Post-process and visualize transient groundwater flow and transport model results for reporting
- Slug test analysis and interpretation with AQTESOLV

Kam Kotia Mine, Canada (2020-2022) for Ontario Ministry of Mines

- Field investigation, instrumentation, sampling, and monitoring of groundwater, pore water, and pore gas in a legacy tailings impoundment remediated with an engineered cover
- Laboratory characterization of the hydrogeological and geochemical properties of mine waste, soil, and aqueous samples
- Data analysis, interpretation, and numerical modeling of the variably saturated flow and gas transport in an engineered composite cover to assess cover performance
- Reactive transport modeling of the coupled thermo-hydrogeochemical processes

Detour Lake Mine, Canada (2021) for Agnico Eagle Mines Limited

- Field sampling, testing, and monitoring of water balance, seepage quality, and pore gas in waste rock piles

Sudbury Integrated Nickel Operations, Canada (2022) for Glencore

- Field sampling, testing, and monitoring of seepage quality of a tailings impoundment remediated with municipal biosolids
- Field tracer test and sampling to evaluate a permeable reactive barrier (PRB) for groundwater remediation

SITE ASSESSMENT AND REMEDIATION***Phase I/II Environmental Site Assessment and Contaminant Site Remediation (2018-2020) for Alberta Orphan Well Association, BC Oil and Gas Commission, Canadian Natural Resources Limited, Cenovus Energy, and Suncor Energy***

- Processed borehole logs, water chemistry, soil quality, and hydraulic testing data; conducted statistical analysis and environmental searches
- Applied and modified environmental guidelines (Alberta Tier 1 & Tier 2, BC CSR & site remediation protocols) based on site-specific conditions
- Managed EQUIS and Access databases, tracked project deliverables, and prepared reports

PUBLICATIONS

Zhang, A., Bain, J. G., Schmall, A., Ptacek, C.J., & Blowes, D. W. (2022). Tailings geochemistry and mineralogy under a composite cover. GAC MAC IAH-CNC CSPG Joint Conference, Halifax, NS