



# Global Water Futures

## UW Core Technical Positions



UNIVERSITY OF SASKATCHEWAN

Global Water Futures

[GWF.USASK.CA](http://GWF.USASK.CA)



University of  
Waterloo



# Remote Sensing

## Dr. Kiana Zolfaghari (PhD) (C. Duguay)

- research in the application of optical remote sensing methods for biogeochemical characterization of waterbodies.
- specifically on the investigation of algal blooms and water turbidity for improving lake models.

## Current Projects

- FORMBLOOM: *Processing of Sentinel 2/ Landsat imagery for water quality monitoring. Buffalo Pound Observatory.*
- NWF: *Optical remote sensing for mapping of icings in the Sahtu Observatory, NWT*



**Kick Boxer  
In Training**



# Smart Sensors Network

## Dr. Jimmy Huang (PhD) (Juewen Liu)

- supporting the design and operation of autonomous and semiautonomous “smart” sensor networks
- developing functional DNA (DNAzyme) into practical sensors for heavy metal ion detection.



**Semi Pro  
Snowboarder**

## Current Projects

- Sensors and Sensing Systems for Water Quality Monitoring: *matrix effect on DNA based metal sensors. Selection of DNA that work in cold water (below zero). Grand River Basin.*



# Water Quality and Aquatic Ecosystems

## Hadi Dhiyebi (MSc) (M. Servos)

- acquisition and management of water quality and ecotoxicity data in the lab and field.
- development and implementation of novel environmental indicators for aquatic ecosystems.



Pro Soccer  
Player

## Current Projects

- Lake Futures: *Data collection in Grand River and Lake Erie.*
- Next Generation solutions: *detection of eDNA in controlled environments. Grand River and Alder Creek Observatories, UW Wetlab.*



# Smart Watershed Field Technician

**(in final stages of hiring process) (D. Rudolph)**

- coordinate field work efforts in GWF watershed observatories in Southern Ontario and provide field support to other GWF observatories.
- maintain highly instrumented GWF watershed observatories, in particular those located in Southern Ontario.
- install, calibrate and maintain water monitoring systems for groundwater and surface water systems.



# Smart Watershed Laboratory Technician

## Marianne Vandergriendt (BSc)(F. Rezanezhad)

- design, develop and evaluate lab and field experimental procedures and analytical analysis for water/soil related GWF
- supervise and perform water and soil sample analysis utilizing a wide range of analytical instrumentation

## Current Projects

- Lake Futures: *Water chemistry analyses of the samples from the Great Lakes Basin*
- Winter Soil Processes in Transition: *Laboratory experiments and soil and water chemical and microbial analyses (UW Labs).*
- Sensors and Sensing Systems for Water quality Monitoring: *Developing and testing Multi Fiber Optode (MuFO) dissolved oxygen microsensor system for soil and sediment.*



**Garden and  
Building Designer**