Department of Geology

Faculty of Science / University of Peradeniya



Dr. Dayal Wijayarathne

B.Sc. (Perad.), M.S. (BGSU, USA), Ph.D. (McMaster, Canada)

Senior Lecturer

malavi@pdn.ac.lk
spkmlv@gmail.com
+94 81 239 (4214)
+94 70 193 8804
#

About Me

I am a geologist with a particular interest in water science and currently serve as a Senior Lecturer in the Department of Geology at the University of Peradeniya. I obtained my B.Sc. Honours in Geology from the University of Peradeniya, M.S. in Geology from Bowling Green State University (BGSU), USA, and Ph.D. in Earth and Environmental Sciences from McMaster University, Canada. My research interests include numerical modelling, hydrogeology, hydrology, and groundwater–surface water interactions, viewing groundwater and surface water as one interconnected system. I combine numerical modelling, field observations, geospatial analysis, and isotope-based approaches to understand water movement and support sustainable water management, alongside broader interests in natural hydrogen exploration. I also seek to connect traditional knowledge with modern science to advance water security and ecosystem resilience. Returning to the department where my academic journey began, I bring international research experience into teaching, encourage critical thinking, and connect scientific concepts with practical environmental challenges. Beyond my routine academic and research duties, I aim to contribute additional knowledge and expertise, as time permits, to enhance the University of Peradeniya's international visibility.

Higher Education Qualifications

PhD

McMaster University
Canada
(2021)

MSc

Bowling Green State University
USA
(2015)

BSc

University of Peradeniya
Sri Lanka
(2013)

 © 2022, Faculty of Science, UoP

Awards, Scholarships, Memberships & Fellowships

- Outstanding Graduate Student Award, Department of Geology, BGSU (2015)
- SGS INTL EXCELL AWARD 2016-2017, School of Earth, Environment & Society, McMaster University
- SGS INTL EXCELL AWARD 2017-2018, School of Earth, Environment & Society, McMaster University
- Two years of MS Academic Scholarship 2013-2015, Bowling Green State University, Ohio, United States
- Four years of Ph.D. Academic Scholarship 2016-2020, McMaster University, Ontario, Canada

© 2022, Faculty of Science, UoP

Positions Held

- Co-coordinator – MSc Program in Water Resources Management, Postgraduate Institute of Science (PGIS), University of Peradeniya, Sri Lanka- (September 2026 - Present)
- Professional Geoscientist (Practicing Registrant) - Association of Professional Engineers and Geoscientists of Alberta (APEGA)- (July 2026 - Present)

 © 2022, Faculty of Science, UoP

My Teachings

- GEO2092: Introductory Structural and Field Geology
- GEO3012: Hydrology
- GEO3022: Geology of Sri Lanka
- GEO3102: Hydrogeology
- GEO4012: Applied Hydrogeology
- GEO4042: Scientific Writing and Seminar

Research Interests (Research Fields/ Projects)

- Groundwater–surface water interactions and integrated water systems
- Numerical modelling in hydrology and hydrogeology
- Ecohydrology, groundwater-dependent ecosystems, and wetland restoration
- Flood forecasting and hydrometeorological data analysis
- Climate change and wildfire impacts on water resources
- Isotope-based approaches to water movement and water budgets
- Geospatial analysis and remote sensing for water resources and environmental assessment
- Traditional water management systems, water security, and ecosystem resilience
- Natural hydrogen exploration and geological prospectivity mapping

Ongoing Research and Projects

Nothing to show under this subheading !!!

© 2022, Faculty of Science, UoP

Key Publications

Nothing to show under this subheading !!!

Conferences

GeoConvention 2025

HELD AT : Calgary, Alberta, Canada - (May 12 – 14)
TOPIC : *Exploring the Potential for Natural Hydrogen in Alberta: A Preliminary Assessment*

European Geosciences Union (EGU) meeting 2023

HELD AT : Vienna, Austria - (April 23 - 28)
TOPIC : *HYPE model workflow – a "bottom-up" approach to community large-domain hydrological modelling*

American Geophysical Union (AGU) Fall Meeting 2022

HELD AT : Chicago, Illinois, USA - (December 12 - 16)
TOPIC : *Evaluating RDRS Quantitative Precipitation Estimates (QPEs): Hydrologic Modelling Perspective*

American Geophysical Union (AGU) Fall Meeting 2018

HELD AT : Washington DC, USA - (December 10 - 14)
TOPIC : *An Event-based Spatiotemporal Verification of Canadian Precipitation Analysis (CaPA) for Enhanced Calibration of Flood Forecasting Models*

American Geophysical Union (AGU) Fall Meeting 2017

HELD AT : New Orleans, Louisiana, USA - (December 11 - 15)
TOPIC : *Continuous Long-Term Modeling of Shallow Groundwater-Surface Water Interaction: Implications for a Wet Prairie Restoration*

My Publications

Please goto the website.

https://sci.pdn.ac.lk/geology/staff/Dayal-Wijayarathne

© 2022, Faculty of Science, UoP