GROUNDWATER WEEK 2023

LAS VEGAS, NEVADA | DECEMBER 5-7, 2023

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🔍   MENU

SCHEDULE AND AGENDA

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Atasha Loreigne

ALB

Bautista
Research Assistant II

University of Guam Water Environmental Research Institute of the Western Pacific

Ms. Atasha Bautista is a freshman at the University of Guam, pursuing a degree in chemistry and biology. She is known for her excellent academic standing and enthusiasm for the field of STEM. As a freshman, Atasha completed a variety of coursework and research. She took part in the Short-Term Research Experience Program to Unlock Potential (STEP-UP) of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) and is currently employed as a research assistant at the University of Guam Water Environmental Research Institute of the Western Pacific (WERI) under the direction of Dr. Nathan C. Habana. Her primary area of study is groundwater modeling in Guam.

Sessions

Times shown in America/Los_Angeles

⊘ N107/N108

Forum, Science & Engineering Forum

December 5, 2023
9:40 AM - 11:00 AM

Groundwater Modeling

ALB
Atasha Loreigne Bautista
Research Assistant II, University of Guam Water Environmental Research Institute of the Western Pacific

MO
Michael Ou
Scientist, SSPA

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Subsessions

Subsessions

Configuration-Based Uniform Model-Independent Postprocessing Framework for
Automated Modeling Workflows
Groundwater Models and Large Reservoirs - Seepage Recovery and Safety Analysis
Integrated Hydrologic Model Development and Calibration – Leveraging Python, and
Parallel Processing
Wastewater Discharge From Septic Tanks, Impact to Groundwater Quality, Northern Guam
Lens Aquifer

Forum, Science & Engineering Forum

December 5, 2023
10:40 AM - 11:00 AM

Wastewater Discharge From Septic Tanks, Impact to Groundwater Quality, Northern Guam Lens Aquifer

The Northern Guam Lens Aquifer (NGLA) supplies 90 percent of the island's
utility water. However, ongoing urban growth, aging established residential
areas, and wastewater discharge above the water source via septic tanks and
leaky sewer mains have been a concern. Production well nitrate analysis has
shown an increasing trend in nitrate-N concentrations in production wells.
Preliminary application of a solute transport model, MODFLOW-USG, at
Swamp Road tested current regulations on residential septic tank density and
distance of buildings to wells. Model results revealed the extent of contaminant
plumes near production wells, which may support refined regulations for
development near production wells. This research continues to make model

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