

Emilie Saucier, University at Buffalo, Buffalo, New York, USA for their project: *Spatiotemporal Gas Flow Variation in Cyclic Vulcanian Style Eruptions*.

Émilie Saucier is a PhD candidate in Earth Sciences at the University at Buffalo, where she holds a Presidential Fellowship and researches under the supervision of Dr. Stephan Kolzenburg. Her doctoral research investigates the fundamental relationship between magma permeability and gas transport, examining how spatio-temporal variations in degassing reflect the evolving internal structures of vulcanian-style volcanoes.

Building on her previous work which analyzed physical permeability in enclave-bearing dome lavas at Lassen Volcanic Complex, her current project targets the dynamic degassing side of volcanic systems. Specifically, she is deploying a SO₂ camera system based on the design by Wilkes et al. (2023) to capture high-resolution, spatio-temporal gas flux datasets at Santiaguito volcano in Guatemala. By quantifying changes in SO₂ flux over time, her research aims to establish gas emissions as a proxy for shifting sub-surface permeability and the opening and closing of gas pathways during explosive activity.

Prior to her PhD, Émilie earned an M.S. in Geosciences from Penn State University, focusing on conduit sealing at Telica volcano, and a B.S. in Honors Geology from McGill University. She has served as the Primary Convener for AGU session *Volcano Processes, Monitoring, and Hazards* and President of UB's Earth Sciences Graduate Student Association. Her broader dissertation objective synthesizes physical rock properties with active monitoring data to advance the understanding of permeability evolution in dynamic volcanic environments.

