OLD DOMINION UNIVERSITY
Center for Coastal Physical Oceanography

INSTITUTE FOR COASTAL ADAPTATION & RESILIENCE℠

Spring 2026 Virtual Seminar Series

"MODELING SOCIAL VULNERABILITY & NATURE-BASED FLOOD RISK REDUCTION *EQUITY, SCALE, AND SOCIO-ECOLOGICAL PERSPECTIVES*"

SINA RAZZAGHI ASL
Department of Political Science & Geography, Old Dominion University

Monday, February 2, 2026
3:30 PM EST

ZOOM LINK
Meeting ID: 961 3059 2894
Passcode: 582468

Abstract
Flood risk is not only a physical process, but a socio-spatial outcome shaped by structural inequalities, scale, and governance. This seminar presents recent research on modeling social vulnerability and nature-based flood risk reduction using intersectional indicators, spatially adaptive methods, and socio-ecological frameworks. I will demonstrate how vulnerability relationships shift across spatial scales, how aggregation distorts disaster assistance equity, and how nature-based solutions redistribute risk rather than uniformly reduce it. Together, these findings highlight the need for equity-sensitive, scale-aware, and governance-informed approaches to flood risk management.

Biography
Sina Razzaghi Asl is an Assistant Professor of Hazards and Environmental Geography at Old Dominion University. His research integrates hazards geography, social vulnerability, and nature-based solutions to examine how spatial, social, and governance factors shape disaster risk across scales. He applies advanced geospatial analysis, remote sensing, and spatial statistical modeling to study relationships between nature-based solutions, social vulnerability, and hazard outcomes. His work has been published in leading journals, including *Science of the Total Environment*, *Progress in Physical Geography*, *Natural Hazards*, *Annals of the American Association of Geographers*, and *Applied Geography*. He is a co-author of Chapter 8 (*Mitigation Matters*) in the Third Assessment of Natural Hazards in the United States and serves as co-director of the AAG Hazards, Risks, and Disasters Specialty Group.