



# VICEROY NORTHWEST INSTITUTE FOR CYBERSECURITY EDUCATION AND RESEARCH



CySER Virtual Seminar

**Ann Marie Reinhold**

**Gianforte School of Computing, MSU**

***From Phishing to Floods: Effective and Timely Risk Communication Messages are Imperative***

**Apr. 15, 2024, 3:10 – 4 PM Pacific**

Team Link: [Click here to join the meeting](#)

Meeting ID: 249 863 819 057 | Passcode: yeswjX

Call in (audio only) +1 509-498-6399 | Phone Conference ID: 955 807 517#

## Abstract:

Communicating accurate information about risk effectively and efficiently is crucial. In the face of hazards, protection of lives, property, and critical infrastructure depends on humans receiving hazard information, weighing risks, and making decisions. However, conventional hazard messaging often fails to engage target audiences, and consequently does little to motivate audiences towards protective actions; this is true across hazard domains from cybersecurity to natural hazards. To address this problem, our team has built the Domain Agnostic Risk Communication (DARC) Framework for generating effective risk communication messages rapidly. The DARC Framework employs large language models to operationalize best practices in risk communication research. These practices include the creation of risk messages with highly customized framing that incorporate key tenants of the Narrative Policy Framework. We are testing messages created with the DARC Framework across four distinct hazard types, including cybersecurity (phishing), national security (active shooter), organizational security (insider threats), and natural hazards (flooding). In this talk, we present this ongoing research and future directions that build towards the goal of effectively engaging target audiences and motivating them towards protective actions.

## Bio:

Dr. Ann Marie Reinhold is an Assistant Professor in the Gianforte School of Computing and Co-Director of the Software Engineering and Cybersecurity Lab at Montana State University in Bozeman, MT. She specializes in the development and application of computational methods to understand the mechanisms underpinning pressing environmental, societal, and cybersecurity problems. Reinhold completed her B.A. in Biology at the University of Colorado at Boulder, graduating summa cum laude in 2004. She earned her M.S. in Biology from Duke University in 2008 and Ph.D. in Ecology from Montana State University in 2014. Her postdoctoral training and ongoing research employ a pan-disciplinary approach to data science.



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