



## DISSERTATION DEFENSE



# ALLISON MCDONALD

## Advancing Digital Safety for High-Risk Communities

Wednesday, April 27, 2022

1:30 – 3:30pm

[Virtual](#)

**ABSTRACT:** Privacy and security tools and strategies are not equally effective for everyone—many high-risk communities, such as sex workers, undocumented immigrants, and survivors of intimate partner violence, face security, privacy, and safety risks that are not well addressed by current solutions. This dissertation explores how technology and vulnerability intersect to create differences in access and digital safety for different high-risk populations, and demonstrates the strengths of investigating these issues using a mix of both in-depth qualitative and large-scale quantitative methods.

By first exploring the particular privacy and security needs of undocumented immigrants in the United States and sex workers in Europe, this work elucidates the primary safety goals and the barriers to these goals for two specific high-risk populations. Both studies revealed factors, both human and technical, that made privacy and security difficult. Many of the tools and platforms our participants relied on were not built with high-risk users in mind, and failed to provide sufficient protection or controls to meet their specific safety needs. I next examined two particular technologies that lead to privacy and access problems: the collection and use of phone numbers as account identifiers, and the application of geoblocking by companies to deny entire countries access to their websites. In both cases, I propose moderate changes to features that could make a significant impact on minimizing harms for vulnerable users. Finally, I present a comprehensive framework that connects privacy harms, personal and community risk factors, and the technical mechanisms that lead risk factors to result in harm. This framework identifies themes for how a broad set of populations are impacted by tech and policy design choices, and enables us to identify patterns in harm across multiple communities.

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