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## **Position paper for the Gender, Online Safety, and Sexuality Workshop (GOSS). Connect to protect: examining the risks of wearable IoT devices in the context of Intimate Partner Violence (IPV)**

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**Position Paper for the Gender, Online  
Safety, and Sexuality Workshop (GOSS)**

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McLaughlin, Dr Leonie Tanczer**

**August 11–13, 2024**

**Title:** Connect to Protect: Examining the Risks of Wearable IoT Devices in the Context of Intimate Partner Violence (IPV)

**Previous Research:** As a first-year PhD student, my preliminary research has focused on the impact of IoT devices on family dynamics. Through pilot interviews and preliminary wearable device testing, I've explored how IoT devices and mobile applications can be a double-edged sword for victims – empowering them in some ways, while also endangering them in others.

**Future Planned Research** Building on this preliminary work, my future research aims to explore the cybersecurity risks associated with wearable IoT devices intended for women's safety. Specifically, I plan to investigate the following:

- **Cybersecurity Risks:** Evaluate the vulnerabilities in wearable IoT devices that could be exploited in abusive relationships.
- **Technology-Facilitated Abuse (TFA):** Examine scenarios in which these devices can be misused, identifying mechanisms of misuse.
- **Victim Vulnerability:** Assess how these devices might increase the vulnerability of victims by interacting with their features and risk exposure.
- **Risk Trajectories:** Map the potential risk trajectories created by the use of these devices and their impact on victims and survivors.
- **Mitigation Strategies:** Develop recommendations for mitigating the identified risks, aiming to enhance safety and minimize potential misuse.

**Ongoing Work and Novel Perspectives** Currently, I am working on a project that tests various women's safety devices to identify potential vulnerabilities, particularly in Bluetooth and other wireless communication protocols. This involves setting up an isolated network environment to conduct in-depth security testing and analysis. The goal is to ensure these devices do not pose unintended risks to users and to contribute to the development of safer and more secure IoT solutions for women.

**Interest in the Workshop** My interest in the GOSS stems from a desire to share insights and collaborate with fellow scholars in this emerging field. This workshop offers a valuable platform to discuss the complexities of using technology for safety in the context of IPV and to explore innovative solutions. I am particularly interested in discussing the broader implications of my research findings on policy and practice, and in learning from the diverse perspectives and experiences of other participants.

My research brings a novel perspective by integrating gender studies with cybersecurity, emphasizing the importance of considering the unique risks faced by women in abusive relationships when designing and deploying safety technologies. By focusing on the cultural, social, and legal contexts of Northern Ireland, this work also aims to provide region-specific insights that can inform global discussions on IPV and technology.