Call for Papers: Virtual Workshop on Usable Cybersecurity and Privacy for Immersive Technologies

Advances in computer vision, data processing, and other technologies has laid the foundation for novel virtual reality (VR), augmented reality (AR), and mixed reality (MR) solutions, collectively called immersive technologies. Immersive technologies are hardware and software systems that create interactive digital visual/spatial environments. These technologies hold promise to drive innovation and economic growth in numerous areas such as workforce, accessibility, and healthcare, but they challenge existing assumptions and practices for digital technologies. For example, large amounts of data may be collected from or about people to create digital worlds or augment the real world, and users can interact with immersive technologies in different ways than other technologies. Cybersecurity and privacy related to immersive technologies must be considered carefully. Immersive technologies may create cybersecurity and privacy risks, some perhaps novel and unique that will need to be managed, but they may also have potential for cybersecurity and privacy protections and other risk mitigations. All the while, users are at the center of these technologies, making usability considerations for immersive technologies critical for cybersecurity and privacy. For example, certain communication modalities may be more (e.g., audio/visual) or less (e.g., menus, text) effective for cybersecurity and privacy information delivered via immersive technologies. Not considering usability in this context risks users not using or misusing cybersecurity features, privacy features, or the technologies themselves. This virtual workshop will explore these technologies and the cybersecurity and privacy considerations they introduce. We invite submissions on the following topics:

- Usable cybersecurity and privacy considerations for immersive technologies, with particular interest in novel considerations.
- Potential approaches for usable cybersecurity and privacy (e.g., risk mitigations) for immersive technology solutions and use cases.
- Potential usable cybersecurity and privacy mitigations that may utilize immersive technologies to deliver protections.
- How usable cybersecurity and privacy impact, or are impacted by, other trust factors (i.e., safety, resiliency, reliability) for immersive technology solutions and use cases.
- Insights for standards and standards development for immersive technologies and use cases.

Submissions will be judged based on their applicability to one or more of the topics above, the novelty of the work, quality of the submission, and relevance of the contribution to the field. We solicit papers describing new research contributions in this area as well as case studies, work in progress, preliminary results, novel ideas, and position papers.

Papers should be at most six pages (excluding references) using the SOUPS template format (MS Word or LaTeX). Submissions should be emailed to immersivetech@nist.gov.

A word about paper length. Papers should be succinct, but thorough in presenting the work. Typical papers will be 5-6 pages long (plus references), but papers can be shorter (e.g. 2-3 pages) if, for example, they present a novel idea with limited preliminary results or a position likely to drive a lively discussion. Shorter, more focused papers are encouraged and will be reviewed like any other paper. If you only need 2 or 4 pages (plus references) to clearly explain your work or idea, please submit a paper of that length.

Reviewers will be instructed to assess the value of the talk to the workshop audience irrespective of the paper length; however, we stress again that the presentation should be sufficiently thorough for reviewers to make this evaluation.

Workshop papers will be made available to attendees prior to the workshop. However, they will not appear in the official SOUPS proceedings. Paper presentations will be approximately 10-12 minutes in length followed by 5 minutes of questions and answers. Presentations must be made remotely as this will be a virtual workshop.

The deadline for submissions is May 23 23:59 AoE (Anywhere on Earth).

Notification of acceptance will be sent to authors by June 6.

The deadline for camera-ready versions of accepted submissions is June 20 23:59 AoE (Anywhere on Earth).

The workshop will be held virtually on August 7 from 13:00 to 17:00 EST.

You can find out more at [our event page](#) or by emailing immersivetech@nist.gov