Cybersecurity Technical Group

The CYBERSECURITY TECHNICAL GROUP (CYTG) was established to serve HFES members and nonmembers who share an interest in studying humans in the context of cyberspace, cybersecurity, and information security (InfoSec). The CYTG promotes the study and observation of how human interaction effects any facet of cybersecurity, and at any level in the system, from end-users of email to military cyber defense teams.

TECHNICAL FOCUS

Cybersecurity human factors includes the scientific application of all human factors and cognitive as well as emotive concepts, including awareness, workload, stress, teaming, signal detection, decision-making, and attention research. It may be studied from the end user, system admin, analyst, manager or other system-element, from a broader sociotechnical and system-wide perspective, and from any place the human is a component of ensuring privacy or security in cyberspace. It also includes the burgeoning areas of automation, autonomy and human-machine teaming in cybersecurity and how to integrate the human's abilities and perspectives.

Cybersecurity can be understood as a highly complex socio-technical system. The purview spans studies of end-user security and privacy (where improving the interactions of humans with software and hardware tools will improve security and reduce the likelihood of successful attacks), to the operations of corporate and national multi-person-teams of cyberspace defenders, as well as the offensive components.

Due in part to the complexity of the cybersecurity domain, the CYTG also places emphasis on sponsoring sessions that bring researchers, practitioners, and sponsors together on various issues (including human-automation teaming in cybersecurity, for example). The goal is to create cross-sector synergy and involve stakeholders and experts from different disciplines.

MEMBERSHIP

Our membership is a multidisciplinary, diverse group of professionals spanning the reach from research to practice. Members hail from military, industry, government, and academia. We also hold dear to our membership subject matter experts (SMEs) who can be consulted on various cybersecurity issues.

Joining: Membership in HFES is not required to be a member of the Cybersecurity Technical Group, although a large portion of members possess it and it is highly encouraged.

BENEFITS OF MEMBERSHIP

The CYTG brings together academia, industry, and government who all approach cybersecurity from different perspectives. By creating this community around study the human component, we hope to *expand the reach of each member into new communities of study.*

The CYTG leadership has put a strong emphasis on bringing potential sponsors to CYTG forums, and having their voices heard. This creates the demand signal for how studies can be proposed and tackled in ways that benefit different sponsors, from government to industry. This is a way to grow and increase the likelihood that HFES-driven research has real impact. Being a member can mean providing this perspective to the group, or receiving and interacting with information from stakeholders.

The CYTG runs an external LinkedIn group (https://www.linkedin.com/groups/12211233/) that aims to share relevant information about issues and publications from the field, as well as facilitate member-to-member discussions. By hosting the online CYTG presence on this professional platform, members can easily post or share links, tag people in their own networks, and actively engage in CYTG discussions and postings. Moreover, *LinkedIn* provides a way for members to expand their networks by directly connecting with other professionals in the group. The overall goal is to facilitate interaction, engagement, and communications outside of the bi-annual newsletter. By allowing direct grassroots contributions from the TG organically, in a way that keeps pace with the cybersecurity field itself. Thus, the group can expand content to include a variety of opportunities related to all aspects of cybersecurity in a way that is temporally relevant.

The CYTG , as one of the technical groups, also serves in a reviewing role for the annual conference session submissions. One benefit of membership is that you will be recognized for your expertise in this area and occasionally asked to comment on incoming work in order to improve it.

ADDITIONAL READINGS

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Sawyer, B. D., & Hancock, P. A. (2018). Hacking the human: the prevalence paradox in cybersecurity. *Human Factors, 60*(5), 597–609.

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HUMAN FACTORS AND ERGONOMICS SOCIETY

The Human Factors and Ergonomics Society is an international, multidisciplinary, nonprofit organization of close to 5,000 members involved in the human factors field. HFES is the largest organization of human factors professionals in the world. HFES members are concerned with the safety, usability, and maintainability of systems and products that involve the human as an operator or maintainer. Since its formation in 1957, the Human Factors and Ergonomics Society has promoted the discovery and exchange of human factors knowledge, as well as the education and training of students and practitioners. The Human Factors and Ergonomics Society is a member of the International Ergonomics Association.