

## Human Factors in Cyber Security

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**Abstract:** Humans, just as much as technology, are at the crux of many of our cyber security challenges, as both the problem and the solution. Humans are the adversaries who instigate attacks; the weakest-links who fall victims to exploitation; and the defenders who can execute effective responses to emerging threats. Yet, we know very little about human behavior in cyber security. In this talk, I will discuss published and ongoing research that employs a combination of behavioral and computational approaches to examine the impact of socio-cognitive factors on decision making of end-users, adversaries and security operators. Particularly, I will discuss research on factors that predict performance of security operations teams, and studies on the influence of adversarial strategies and behaviors on end-user response to phishing attacks. Finally, I will identify follow-on research directions that will use data-driven, interdisciplinary approaches to advance the behavioral science of cyber security through models, metrics and human integrated security solutions.

**Bio:** *Prashanth Rajivan* is a Postdoctoral Research Fellow at the Department of Social and Decision Sciences, Carnegie Mellon University, Pittsburgh. He works with Prof. Cleotilde Gonzalez in the Dynamic Decision Making Laboratory. He holds a Ph.D. in Human Systems Engineering and M.S. in Computer Science from Arizona State University, USA. His research agenda is on the intersection of human factors and computer security. His areas of interests include security risk and decision making, computer supported cooperative work, team cognition, deception, simulation and modeling. He is the author of several peer-reviewed publications and book chapters. His work on multi-agent models of teamwork in cyber defense was awarded the best student paper at HFES annual conference in 2014. His dissertation work was a finalist in the Human Factors Prize on Cyber Security in 2017.

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