

Decision Making in Cyber Security Defense

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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 instigators, the vulnerabilities and, also the defenders who can execute effective responses to emerging threats. In this talk, I will discuss published and ongoing research that employs a combination of behavioral and computational approaches to examine the influence of socio-cognitive factors on decision making of end-users, adversaries and security analysts. Particularly, I will discuss factors that determine the performance of security defense teams; and the influence of adversarial behaviors, strategies, and personalities on end-user response to phishing attacks.

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. His research agenda is on the intersection of security and human behavior. He holds a Ph.D. in Human Systems Engineering (2014) and M.S. in Computer Science (2011) from Arizona State University, USA. His areas of interests include cyber security risk and decision making, computer supported cooperative work, team cognition and leadership, applied cognitive science, simulation and modeling. He is the author of several peer-reviewed publications and book chapters. His dissertation work was selected as a finalist in the Human Factors Prize on Cyber Security in 2017. His work on multi-agent models of teamwork in cyber defense was awarded the best student paper at HFES annual conference in 2014.