

Qualification Statement

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Background and Interests

I am a research scientist with the Formal Methods Section of the Naval Research Laboratory in Washington, DC. My research mainly focuses on the design of expressive specification languages for idealized cryptographic protocols. The resulting formalization give insight into foundational questions of Computer Security such as the nature of the intruder, and how it should be tuned for a given protocol and security goals.

I was introduced to Information Survivability relatively recently while attending a talk by Peter Ryan. This was very new and intriguing to me, and it gave rise to a subsequent discussion with several follow-ups. Survivability appears to operate one level higher than what I usually work on. I see it as a window to a bigger picture in the field of Computer Security.

My expectations from the Information Survivability Workshop are: (1) to learn more about Information Survivability, and (2) to understand whether I can incorporate some of the issues it tries to address into my own work.

My potential contribution to the workshop, besides the fresh perspective of a newcomer, are likely to be related to the formalization of Information Security goals, with an eye towards automation.

Questions to be Addressed at the Workshop

I perceive (maybe wrongly) many of the problems and issues pertaining to Information Survivability as relatively ill-defined. Is there a way to formalize them? If so, what features should a specification language offer to formalize these issues and problems? More in general, how can formal methods help the field of Information Survivability?