

An invitation to the public defense of a doctoral dissertation in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Engineering



QUANTIFYING CYBER RISK BY INTEGRATING ATTACK GRAPH AND IMPACT GRAPH

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Date: 29 July 2020

Time: 10am to 11am EST

Zoom meeting (email cpinto@odu.edu for details)

Summary:

This research built a probabilistic cybersecurity risk analysis model that relates attack propagation with business impact propagation through internal dependencies and allows temporal analysis. The contributions of the research to practice and body of knowledge in Engineering Management, Systems Engineering, Risk Management, and Cyber Security are (1) temporal attack propagation model that adapts vulnerability scoring customizable for various organization, (2) temporal and probabilistic impact propagation assessment model, and (3) integrated attack and business impact propagation assessment for calculating economic impacts of cyber risks.

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