

***The Math & CS Dept. and  
Center for Cybercrime Studies  
Present***

Towards Enabling a Blockchain-based Cybersecurity  
Information Exchange Platform

*Deepak Tosh*

Cybersecurity Researcher  
Department of Computer Science  
Norfolk State University

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**Abstract**

**Title:** Towards Enabling a Blockchain-based Cybersecurity Information Exchange Platform

**Abstract:** Rising rate of cyber-criminal activities has caught the attention of everyone including industry, academia, federal institutions, and military agencies. The initiative to protect critical resources against advanced cyber-attacks requires security investments and a collaborative effort from every organization. Therefore, a CYBersecurity information EXchange (CYBEX) framework is required

to facilitate cyber-threat intelligence (CTI) sharing among the participants (firms) to abate the impacts of cyber-attacks. Since many firms hesitate to participate in the sharing framework, a non-cooperative CYBEX participation game is formulated to guide the firms (players) to strategically analyze if they are interested to participate in CYBEX or not. Through evolutionary analysis, it is found that the participation in CYBEX can be guided by wisely varying the participation cost. Although, incentives could help enhancing participation, integrity of the exchanged threat information and possibility of malicious insiders pose additional risks in implementing CYBEX. To alleviate these risks, the Blockchain can potentially come handy in enabling a trust layer for the CYBEX, which is being investigated and prototyped at present. The speaker will also discuss the focal points of his fundamental and applied Blockchain research across multiple application domains.