BINGHAMTON UNIVERSITY | Computer Science
STATE UNIVERSITY OF NEW YORK

COMPUTER SCIENCE RESEARCH SEMINAR

Debloating Software through Piece-Wise Compilation and Loading

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Friday, February 1, 2019 at noon in room R15, Engineering Build

applications) . While this model aids in the development process, it presents a detrimental impact on security and performance as a majority of clients may not use all of the functionalities . For example, the standard C library (libc) is intended to be widely used and usable across a broad spectrum of applications although not all features are used by all applications . Yet, these clients must bear the burden of carrying all the features in the code with no way to disable or remove those features . Code in these extraneous features may contain its own bugs and vulnerabilities and therefore broadens the

and a generic inter-modular late-stage debloating framework called piece-wise that combines static (i . e . , compile time) and dynamic (i . e . , load time) approaches to systematically detect and automatically eliminate unused code from the entire program image by removing unused and therefore unnecessary code (by up to 90% in some test cases) . As a direct impact, piece-wise significantly increases the effectiveness of current software defense by drastically reducing the amount of code they must analyze and protect .

Bio: Anh Quach is a PhD candidate at Binghamton University advised by Dr. Aravind Prakash. Her research focuses on program analysis, binary analysis, and software debloating.

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Refreshments will be provided!