

## "Unifying Facets of Information Integrity"

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### Abstract:

Information integrity is a vital security property in a variety of applications. However, there is more than one facet to integrity: interpretations of integrity in different contexts include integrity via information flow, where the key is that trusted output is independent from untrusted input, and integrity via invariance, where the key is preservation of an invariant. Furthermore, integrity via invariance is itself multi-faceted. For example, the literature features formalizations of invariance as predicate preservation (predicate invariance), which is not directly compatible with invariance of memory values (value invariance).

This talk presents a unified framework for integrity policies that include all of the facets above. Despite the different nature of these facets, we show that a straightforward enforcement mechanism adopted from the literature is readily available for enforcing all of the integrity facets at once.