

# GL: A Verified Symbolic Execution Framework in the ACL2 Logic

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## **Abstract**

Boyer and Hunt's work on symbolic execution of ACL2 code was presented earlier in this workshop. We are now developing a framework called GL ("G in the Logic") which defines symbolic counterpart functions within ACL2, and a symbolic object representation as a subset of ACL2 objects.

Symbolic counterparts are proven to faithfully simulate their original functions, enabling proof by symbolic execution without reliance on an unverified clause processor. This has been successfully used at Centaur Technology to prove the correctness of several instructions implemented by the VIA Nano processor design, including floating-point addition and integer multiplication.