PL Theory for Threat Analysis

Question:

Can we use the theory of programming languages to build new (semi-)automated tools for conducting threat analysis in a semantically valid way?

Lina: An EDSL for Threat Analysis

- Embedded Domain Specific Functional Programming Languages

    - Host Language: Haskell

- Compositional Attack Tree Specification Language

- Automated Reasoning about Attack Trees using Maude (Quaternary Semantics) and SMT

- Open Source and Available on Github: https://github.com/MonoidalAttackTrees/Lina