

STA: Security Type System for Android
(Chapter 8)

Sound Permission-dependent Type

Integration with Decidable Type Inference

STA Based Implementation Prototype

Verification:
Securing High Level
System Designing

FOT: Fuzzing Orchestration Framework
(Chapter 5)

Versatile in Integrated Functionality

Configurable Fuzzing Strategies

Extensible Programming Interfaces

Directedness
Extension

Multithreading
Extension

Hawkeye: Directed Grey-box Fuzzing
(Chapter 6)

Robust Directedness Mechanism

Integration with Static Analysis

Seed Prioritization and Schedule

Adaptive Strategies Across States

**Doublade: Thread-aware Grey-box
Fuzzing**
(Chapter 7)

Thread-Interleaving Feedback

Awareness of Threading Context

Diversity Guarantee Across Executions

Testing:
Detecting Low Level
Implementation
Vulnerabilities