

PHIKS - PHysical Inspection and attackS on electronics

- Microscopy methods to detect defects on electronics
- Common defects and the tools to detect them automatically
- Ionization effect on ICs from X-rays during inspection
- Non-destructive testing for integrity analysis
- PCB reverse engineering (RE)
- Non-destructive PCB RE
- Image filtering and segmentation methods for netlist extraction
- IC reverse engineering methods; Sample prep, delayering, etc.
- Advanced tools for fast accurate RE, Rapid Trojan detection, etc.
- Introduce attack modules for data extraction
- reading non-volatile memory data
- Extract keys
- Fault injection using laser.
- Attacks on microprocessors, etc.
- Probing attacks
- Extract design for obfuscated gates
- Anti-probing techniques



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- Counterfeit detection
 - Design for Anti counterfeit (DfAC)
 - Electrical Testing
 - **Physical inspection**

- **Physical inspection**
 - Scrutinize external, internal defects, and material composition (closest to all-in-one)
 - Covers all part types, all states of existence, and most counterfeit types

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- Etc.

