

# Sample 2-day Agenda: Side-Channel Analysis Workshop



## Day 1

**9:00- 9:15**

**Welcome and Overview of Rambus Cryptography and Workshop (15 min)**

**9:15 - 10:30**

**Simple Power Analysis (75 min)**

9:15 - 10:00 Introduction to SPA  
10:00 - 10:15 SPA Waveform Analysis Exercise  
10:15 - 10:30 Interactive PIN Verify Attack

**10:30- 10:45**

**Break**

**10:45 - 11:45**

**SPA Modular Exponentiation Exercise (60 min)**

Exercise recovering an RSA exponent using SPA

**11:45 - 12:15**

**Electromagnetic Analysis Demonstration (30 min)**

Live demonstration on a variety of devices showing side-channel leakage and its exploitation

**12:15- 12:45**

**Lunch**

Product Solutions for DPA/Fault attacks discussion

**12:45 - 15:00**

**Differential Power Analysis (135 min)**

12:45 – 13:45 Introduction to DPA  
13:45 – 14:00 Demo: DPA Key Extraction on an FPGA  
14:00 – 15:00 Hands-on exercise

**15:00- 15:30**

**Preventing DPA: Countermeasures (30 min)**

**15:30 - 15:45**

**Break**

**15:45 - 16:00**

**DPA Product Offerings (15 min)**

A review of Rambus Cryptography's analysis platform and DPA-resistant hardware and software solutions.

**16:00 - 16:30**

**Advanced Topics in DPA (30 min)**

Demonstration of advanced DPA techniques

**16:30- 17:15**

**Testing and Certification: Validating and Evaluating Devices (45 min)**

Review of side-channel requirements in existing standards (FIPS, Common Criteria, PCI, etc.) and recommendations for conformance testing.

## Day 2

**9:00 – 9:30**  
**Riscure Intro – 30min**

**9:30 – 10:00**  
**Deep Learning – 30min**

**10:00 – 10:30**  
**Thinking Like an Attacker: An Attacker's Point of View – 30min**

**10:30 – 10:45**  
**Break**

**10:45 – 11:30**  
**Introduction into Fault Injection – 45min**

**11:30 – 12:00**  
**Inspector FI in Python – 30 min**

**12:00 – 12:45**  
**Lunch**  
Product Solutions for DPA/Fault attacks discussion, covering Anti-tamper, hardware root of security, and secure supply chain

**12:45– 13:45**  
**Hands-on Fault Injection**

**13:45 – 14:15**  
**Fault Injection – Hardware and Software Simulation – 30min**

**14:15 – 15:00**  
**Secure Boot – 45min**

**15:00 – 15:15**  
**Break**

**15:15 – 16:00**  
**Source Code Analysis Tool (TCAT) – 45min**

**16:00 – 16:45**  
**Demo's and challenge – 45min**

**16:45 – 17:00**  
**Q&A Wrap-up – 15-30min**