

An aerial photograph of a coastal city, likely Newport, Rhode Island, featuring a large, historic stone castle (Fort Adams) situated on a peninsula. The city is built on a hillside overlooking the ocean, with a harbor filled with boats and a parking lot in the foreground. The text "Welcome to PROOES!" is overlaid in white, bold, sans-serif font across the center of the image.

Welcome to PROOES!

PROOFS:
“Security Proofs for Embedded Systems”
Introduction to the fourth workshop



Presentation Outline

- 1 Goal of PROOFS
- 2 Practical Aspects
 - Program
 - Invited Talks
 - Contributed Talks
 - Proceedings

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What we intend to do:

- **For designers:** get more *confidence* in
 - security-oriented designs;
 - security-oriented CAD tools;
- **For evaluators:** do independent tests / attacks.

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Program of the Day

- Overview
 - Two invited talks
 - Five contributed talks (3 regular, 2 short)

Invited talks

- 1 Jean-Louis LANET (INRIA):
 - *“Black hat can also benefits from formal method”*
- 2 Pascal CUOQ (TrustInSoft):
 - *“Formal verification at the source level that execution time does not depends on secrets — inasmuch as this means anything”*

Contributed talks (regular)

- 1 Shohei Nashimoto, Naofumi Homma, Yu-Ichi Hayashi and Takafumi Aoki:
 - “*Buffer Overflow Attack with Multiple Fault Injection and a Proven Countermeasure*”
- 2 Bruno Robisson, Michel Agoyan, Patrick Soquet, Sébastien Le-Henaff, Franck Wajsbürt, Pirouz Bazargan-Sabet and Guillaume Phan:
 - “*Smart Security Management in Secure Devices*”
- 3 Florian Lugou, Ludovic Apvrille and Aurélien Francillon:
 - “*Toward a Methodology for Unified Verification of Hardware/Software Co-designs*”

Contributed talks (short)

- 1 Sabine Azzi, Bruno Barras, Maria Christofi and David Vigilant:
 - “*Using Linear Codes as a Fault Countermeasure for Nonlinear Operations: Application to AES and Formal Verification*”
- 2 Laurent Sauvage, Tarik Graba and Thibault Porteboeuf:
 - “*Multi-Level Formal Verification, a New Approach Against Fault Injection Attack*”

- 8 submissions
- 16 PC members



Proceedings

- Soft copies can be downloaded from the website:
<http://www.proofs-workshop.org/program.html>.

Login: **proofs2015** Password: **pwd_4_proofs2015**

- We would like to put presentation slides online
- Contributed talks can be revised and submitted for a JCEN special section on PROOFS



- Network: CHES
- Password: ches2015