April 20th - 21st, 2015

Special Event on Hardware Security, Cloud Security and Privacy

In the framework of the IEEE DTIS 2015 conference, which will be held in Naples (Italy) from April 21 to April 23, CINI Cyber Security National Lab has had the great opportunity to organize a two day Special Event (Monday April 20 and Tuesday April 21) dedicated to Hardware Security, Cloud Security and Privacy.

The event aims at fostering and promoting recent worldwide scientific results in **Hardware Security, Cloud Security and Privacy** and it is intended to be an outstanding opportunity for the exchange of ideas and experiences through a rich and intense Special Event program which consists of: **1 Full-Day Tutorial, 1 Keynote, 1 Special Session, 1 Embedded Tutorial and 1 Regular Session.** The program of the Special Security Event is organized as follows:

April 20th, 2015

Full Day Tutorial on Security:

09:00 - 12:00 Tutorial 1: Hardware Security and Trust - Presenter: Giorgio DI NATALE (LIRMM - France)
This talk will present a survey of known attacks and practices in these 4 categories: IC data (assets) attacks, IC design (IP) attacks, IC functionality (tampering) attacks, IC piracy as well as relevant research works and solutions.

14:00 - 17:00 Tutorial 2: Protecting the National Cyber Space: from National Strategies to Recent Malware Campaigns - Presenter: Roberto BALDONI (Sapienza Università di Roma - Italy)
The tutorial will address the issue of ensuring the protection of a national cyber space by discussing the role of national cyber security strategies. It will show a recent study on the degree of awareness of Italian Public Administration on cyber treats. Finally the talk will investigate the severity of recent malware campaigns.

April 21st, 2015

09:00-10:00 Keynote 1: Electronics and Computing in Nano-Era: The Good, The Bad and The Challenging - Presenter: Said HAMDIOUI (Delft University of Technology - Netherlands)

11:00 - 12:30 Session 1B - Special Session on Hardware Security
Organizer: Giorgio DI NATALE (LIRMM)

- Design tools for early evaluation of robustness against fault attacks
  Roberta PISCITELLI, Francesco REGAZZONI (ALaRI USI - Switzerland)
- Physically Unclonable Function Implementation based on the Variability of the Spin-Transfer Torque Magnetic Memories
  Elena VATAJELU (Politecnico di Torino - Italy), Giorgio DI NATALE (LIRMM - France), Marco INDACO (Politecnico di Torino - Italy), Paolo PRINETTO (Politecnico di Torino - Italy)
- Frequencies Signature-based PUF
  Mario BARBARESCHI (Università degli Studi di Napoli "Federico II" - Italy), Giorgio DI NATALE, Lionel TORRES (LIRMM - France)

13:30 - 15:00 Embedded Tutorial: Physical Attacks, Introduction and Application to Embedded Processors - Presenter: Francesco REGAZZONI (ALaRI USI - Switzerland)
This talk introduces the most powerful physical attacks presented in the past and highlights state of the art countermeasures, focusing in particular on the embedded system's scenario.

15:30 - 17:00 Session 3B - Hardware Security and Trust

- Testing 90nm Microcontroller SRAM PUF Quality
  Mario BARBARESCHI, Ermanno BATTISTA, Antonino MAZZEO, Nicola MAZZOCCA (Università degli Studi di Napoli "Federico II" - Italy)
- Quality Trends Analysis for the Anderson PUF Varying the Supplied Voltage
  Mario BARBARESCHI, Pierpaolo BAGNASCO, Antonino MAZZEO (Università degli Studi di Napoli "Federico II" - Italy)
- On the Limitations of Logic Testing for Detecting Hardware Trojans Horses
  Marie-Lise FLOTTES, Sophie DUPUIS, Papa Sidy BA, Bruno ROUZEYRE (LIRMM - France)