

# Youssef El Housni

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born in Morocco the 23<sup>rd</sup>, February 1994



*"Imagination is more important than knowledge."*

*- Albert Einstein*

## Education

2013–2016 **ENSEIRB-MATMECA School of engineering, Bordeaux, France.**

- Master of science in Signal Processing and Applied Mathematics.

- Bachelor of science in Electronics.

2011–2013 **Moulay Al-Hassan, Tangier, Morocco.**

Preparatory classes for the French national entrance exam for admission to the 'Grandes Ecoles' Science and Engineering schools.

## Experience

10/2016– **R&D Engineer, Secure-IC, Rennes.**

present

- Video steganography and steganalysis on embedded devices.
- Stochastic models of a hardware TRNG (True Random Number Generator) (*patent pending and 2 papers in preparation*) and a hardware PUF (Physically Unclonable Function) (*Contribution to appear in ISO 20807 part 2*).
- Elliptic curve cryptography: Theory and countermeasures.
- Post-quantum cryptography (Isogenies, lattice and code-based cryptography) (*submitted a paper with a NIST PQC candidate*)
- Artificial intelligence for embedded security.

03/2016– **R&D Intern, Orange Labs, Rennes.**

09/2016

developed a state-of-the-art speaker recognition system based on machine learning techniques (*ranked second best internship in Orange Labs*)

06/2015– **R&D Intern, Kansai University, Osaka, Japan.**

09/2015

developed an active noise control system for IRM machines under the supervision of professor Yoshinobu Kajikawa.

## Computer skills

Programming C/C++, Python, Bash, Matlab, L<sup>A</sup>T<sub>E</sub>X.  
and software

Operating Linux, MacOS, Windows.  
system

Versioning SVN, git.

## ■ Patents

*Patent pending* Embedded dynamic statistical tests for TRNGs (joint with Florent Lozac'h). Secure-IC S.A.S.

## ■ Submitted and working papers

*submitted to WAIFI 2018* On the performance and security of  $GF(2^N)$  computation for small  $N$ . (joint with Sylvain Guilley, Adrien Facon, Jean-Luc Danger, Sylvie Herbel, Edoardo Persichetti, Cheikh Thiecoumba Gueye, Ousmane Ndiaye and Alexander Schaub)

*In preparation* Ring oscillators based TRNG: A new architecture. (joint with Jean-Luc Danger and Sylvain Guilley)

*In preparation* On the stochastic model of the metastable TRNG. (joint with Jean-Luc Danger and Sylvain Guilley)

## ■ Interests

Football Played in the moroccan regional championship with Tetouan local team from 2000 to 2011.

Mathematics Participated twice in the National Mathematical Olympiads.