

Ninon EYROLLES

27 years old, French nationality

WORK EXPERIENCE

- JUNE 2017 — SEPT 2018 | **Research engineer in computer security** at QUARKSLAB, Paris
Security analysis of software
Reverse engineering of software offering cryptographic features (data encryption, protected communications), security audit of cryptographic open source projects.
- DEC 2013 — JUNE 2017 | **PhD student** at QUARKSLAB, Paris
Study of software obfuscation with mixed expressions
Study of a data-flow obfuscation using Mixed Boolean-Arithmetic (MBA) expressions: structuration of the subject, reconstruction of the obfuscation technique from real-world examples and implementation of a simplifier in Python.
- MAR. — SEPT. 2013 | **Internship in computer security** at QUARKSLAB, Paris
Comparison of control-flow graphs for malware recognition
- MAY — AUG. 2012 | **Internship in robotics** at COFRES, Yeosu, South Korea
Robotic maintenance during the International Exposition held in Yeosu

EDUCATION

- JUNE 2017 | **PhD in Computer Science**, Université de Paris-Saclay, France
- SEP. 2013 | **Master in Cryptology and Computer Security**, Université de Bordeaux 1, France

PUBLICATIONS

- *Obfuscation with Mixed Boolean-Arithmetic Expressions: Reconstruction, Analysis and Simplification Tools*
N. Eyrolles — PhD thesis, 2017.
- *Arybo: Manipulation, Canonicalization and Identification of Mixed Boolean-Arithmetic Symbolic Expressions*
A. Guinet, N. Eyrolles, and M. Videau — In GreHack Proceedings of 2016
- *Defeating MBA-based Obfuscation*
N. Eyrolles, L. Goubin, and M. Videau — In Proceedings of Software PROtection, SPRO 2016 ACM

CONFERENCES AND WORKSHOPS

- MAR 2018 | **Introduction to Reverse Engineering and Obfuscation** (workshop), *Blackhoodie workshop hosted by Troopers 2018*, Heidelberg
- NOV. 2017 | **Deobfuscation with Miasm using Symbolic Execution** (workshop), *Blackhoodie 2017*, Luxembourg
- OCT. 2016 | **Defeating MBA-based Obfuscation**, *SPRO 2016*, Vienna, Austria
- JULY 2014 | **Obfuscation: know your enemy**, *RMLL 2014*, Montpellier, France

TEACHING

- 2016 — 2018 | **Introduction to Obfuscation**, Master 1 or 2, *UPMC* and *Université de Bordeaux*
Lecture and practical class about Python obfuscation
- 2018 | **Introduction to Reverse Engineering**, 4th year, *ESIEA*
Lectures and practical classes in french and english, presenting the basic principles of reverse engineering