



## **PhD CIFRE scholarship: “Joint source-cryptographic-channel real-time secured voice communications on voice channels”**

**Job type:** A CIFRE scholarship allows students to conduct their research within a private company, in collaboration with an academic team of a public research laboratory. Supervision is shared between the company and the academic laboratory. PHD student is given an employment contract from the company for 3 years and receives a salary with possibility of contract extension after the scholarship.

**Name of the company:** BlackBoxSecu

**Company website:** [www.blackboxsecu.com](http://www.blackboxsecu.com)

**City and zip code of the scholarship:** 1047 route des Dolines, 06560 Sophia-Antipolis, France

**Name of the partner academic laboratory (so already known):** I3S lab. (UMR7271) University of Nice Sophia-Antipolis / CNRS

**Description of the theme of research (without any confidential character):** BlackBoxSecu has recently developed an efficient and novel way to allow encrypted voice communications on voice channels (typ. walkie-talkies, GSM voice channels, plain old telephone, internet). To increase the security of the encryption, reduce the delays induced by the multiple steps, and optimize the energy efficiency, the purpose of this thesis would be to investigate a joint source-cryptographic-channel approach to merge the different blocks (compression, ciphering, modulation, etc.) into one block, more efficient and having higher performance.

The thesis should be done at the premises of BlackBoxSecu and in collaboration with Prof. Bruno Martin and Dr. Jerome Lebrun of the I3S lab. of CNRS / Université Côte d'Azur

**The candidate must meet certain requirements to be eligible for this program:**

- The candidate must hold a Master of Science diploma (or equivalent) and must not have entered doctoral studies for more than a year.
- It should be his first professional experience in research domain.
- The CIFRE program is open to all nationalities of the European Union and Switzerland.

**Beginning of the program:** Autumn 2017

**Gross annual salary:** ~24k Euros + social security + medical package

**To apply:** Please send your cover letter and resume to [contact@blackboxsecu.com](mailto:contact@blackboxsecu.com)