



جامعة بجاية
Tasdawit n Bgayet
Université de Béjaïa

Faculté des Science Exactes

Vice Doyen chargé de la P/G

Report on research activities (Rapport de stage de formation à l'étranger)

Student : ZEBBOUDJ Sofia

Year : 02

PhD supervisor : OMAR Mawloud

Department : Informatique

Research period : May 9th, 2018 - July 4th, 2018.

Location : Quantum Technology Lab, Dipartimento di Fisica, Università degli studi di Milano, Italy.

Goals : - Implementation of a quantum key distribution proposed during my first year of PhD and starting of a new line of research.

Collaborating researchers : The work has essentially been done with the collaboration of Simone Cialdi and Stefano Olivares from the Quantum Technology Lab of the University of Milan. Discussions about the feasibility of the scheme have been held with Matteo Paris.

Experiments : - Presentation of the quantum key distribution scheme proposed during my first year of PhD.

- Discussions about the feasibility of the quantum key distribution scheme using continuous wave laser and adaptation of it to meet the optical devices of the laboratory.
- Simulation of an attack on the quantum key distribution scheme.
- Implementation of the scheme.

Results : - Implementation of a proof of principle of the quantum key distribution scheme.
-Starting of a new line of research on Quantum Key Distribution.

Student

Sofia Zebboudj

Head of Quantum Technology Lab

Matteo G. A. Paris

