



Host Institute: Toshiba Research Europe Ltd

Project Supervisor: Dr Andrew Shields

ESR: Innocenzo De Marco

Starting date: February 2017

Duration: 3 years.

Project Description

Photonic integration on semiconductor substrates permits building more reliable, compact, and power efficient photonic systems. This project will conduct R&D on how the optics of a QKD system can be integrated on semiconductor substrates. It will employ tools such as the generic foundry platforms as well as in-house fabrication. Although standard building blocks such as lasers and electro-optic modulators are known for conventional photonics, best performance for QKD cannot be achieved by just combining them to form a photonic circuit. The project will investigate methods to overcome this limitation with the aim of achieving secure bit rates and maximum fibre reach far beyond the current state of the art.

Project Outcomes

To be updated.