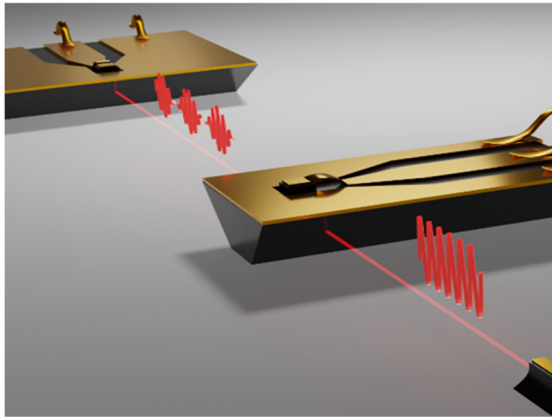




Webinar 1 – Part 1

## High speed components: unipolar quantum optoelectronics



"This talk will be an introduction to a unipolar quantum optoelectronics system, that has been demonstrated in the thermal atmospheric window, at  $\sim 10 \mu\text{m}$  wavelength. The system comprises a continuous wave (cw) quantum cascade (QC) laser, an external modulator, and a QC detector. Due to a very short lifetime of the optical transitions, the devices used have a very broad frequency bandwidth (several tens of GHz), and the whole system allows for high data transmission with bitrates in excess of  $30 \text{ Gbit s}^{-1}$ ."

*Carlo Sirtori received his PhD in 1990 from Uni. Milan, and the same year he joined Bell Labs. There he was one of the inventors of the "Quantum Cascade Laser". He worked for THALES Research & Technology (TRT), University Paris Diderot, and since 2018 he is professor with Ecole normale superieure, and holds the ENS-THALES Chair of the Centre of Quantum Devices.*



Join Carlo's talk on Wednesday, April 13 at 11am CET on the Zoom-link below

