

# QOSILICIOUS

## Quantum-Optic Silicon as a Commodity

Newsletter

n° 3

05/2026

### **QOSILICIOUS scores high at OFC'26 in Los Angeles**

QOSILICIOUS was well represented at the Optical Fiber Communication (OFC) conference, which with ~17,000 attendees marks the world-wide largest congress on optical telecommunications and datacenter technology. Two papers have been presented by AIT's research team, demonstrating dynamic key allocation through a multi-granular assignment of QKD network resources such as spectrum and detection mode. Moreover, the sensitivity of multi-lane ribbon fibers to bend-induced crosstalk has been reported – which some of the attendees perceived as “scary results”.

It's our great pleasure to be awarded with a “top-scored” paper following the paper review process, evidencing the novelty and impact of QOSILICIOUS' technological development. Stay tuned for an extended journal version of our conference contribution – which is expected to surface later on this year.



### **How does a typical day look like when working in ... “quantum photonics”?**

QOSILICIOUS researchers Bernhard Schrenk and Florian Honz shed a bit of light on this important question to a group of students, who enjoyed their taster apprenticeships at AIT, Vienna.

Besides providing insights on the benefits that quantum technology will soon contribute to our daily lives, the students were able to see first chip-scale solutions for quantum communication assets such as quantum key distribution. Moreover, the students took on the challenge of coupling visible light from a fiber waveguide to a photonic integrated circuit – a practical challenge that can be considered key to the daily lab work when addressing novel device technologies. We hope that the experiences made during these days will motivate some of our student group to take on a career path leading to a technical or scientific field.

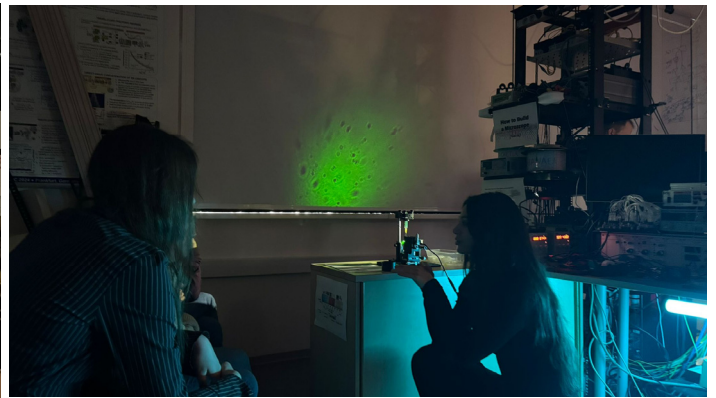
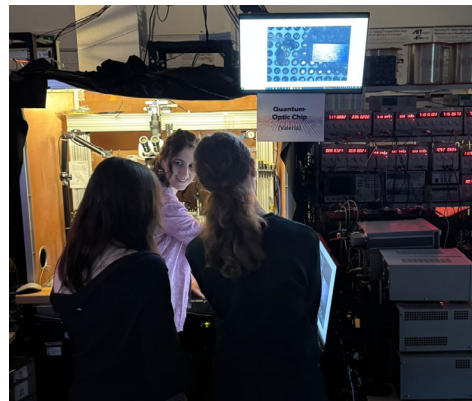
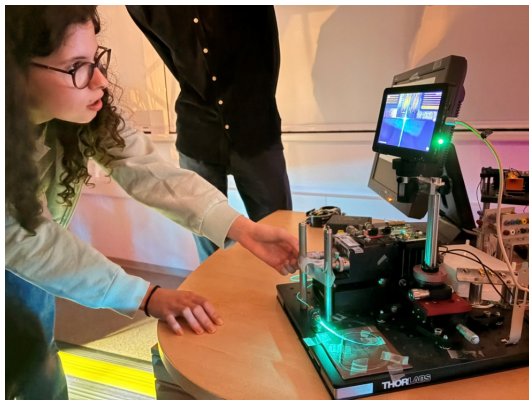


# Extending the Trust Continuum till the Edge of ICT Networks

# QOSILICIOUS

## **Promoting STEM careers to young female students**

QOSILICIOUS researchers from AIT had the pleasure to welcome a group of female students in their lab in course of the Vienna Daughters' Day, allowing them to showcase scientific work and to promote careers in STEM fields. Valeria Saggio, Bernhard Schrenk, Florian Honz and Manu Kos engaged the young students in a set of hands-on experiments that demonstrate physical concepts while explaining the challenges residing for optical technologies, including chip-scale quantum optics and fiber-optic transmission – for example by streaming music over a jet of water, building a microscope out of a water droplet, or by coupling light into a photonic chip themselves. Finally, the students had the opportunity to get a micron-precision measurement of their hair diameter, and to try on their skills in managing polarization of light in a Snake-like arcade game.



## **Our Recent Publications**

- F. Honz, V. Pezelj, V. Saggio, W. Boxleitner, M. Hentschel, P. Walther, H. Hübel, and B. Schrenk, "Programmable Quantum Key Distribution Network for Dynamic and Multi-Granular Key Allocation", in *Proc. Opt. Fiber Comm. Conf. (OFC)*, Los Angeles, United States, Mar. 2026, paper Tu3K.1
- F. Honz, V. Pezelj, T. Strobl, F. Kutschera, V. Saggio, P. Walther, H. Hübel, and B. Schrenk, "Implementing QKD over Multi-Fiber Ribbon Cables: How Dark is the 'Dark Fiber'?", in *Proc. Opt. Fiber Comm. Conf. (OFC)*, Los Angeles, United States, Mar. 2026, paper W3K.1
- F. Honz, W. Boxleitner, M. Ferreira-Ramos, M. Hentschel, P. Walther, H. Hübel, and B. Schrenk, "Monolithic Multi-Channel SiGe Quantum Key Distribution Transmitter Chip", *Journal of Lightwave Technology*, vol. 44, no. 3, pp. 1151-1158, Feb. 2026.