



## MIT Technology Review list of the 35 Innovators Under 35

Quside co-founder and CEO, Carlos Abellan, recognised for the development of chip with the fastest and smallest quantum entropy source for secure random number generation

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"Innovators Under 35" is an annual list that recognises outstanding innovators who are younger than 35 years old. The award spans a wide range of fields, including biotechnology, materials, computer hardware, energy, transportation, communications and the Internet. This list from the MIT Technology Review recognises individuals whose outstanding technical work and results promises to define the future technological path for the following decades. It rewards ingenious and elegant work that matters to the world at large; not just to peers in a particular field or industry.

Dr. Abellan is the co-founder and CEO of Quside, a spinoff company from ICFO who are a leading research centre in the field of photonics. Born from an intensive research and development program in quantum technologies at ICFO, including Abellan's Ph.D. thesis, the spinoff company is now commercialising quantum random number generators. The technology is an essential element for guaranteeing long term protection of our data in an increasingly complex hyper-connected society, with billions of devices talking to each other and vehicles driving autonomously in our streets. As Carlos Abellan comments, "We started in the lab a few years ago, and we're now focused on scaling the technology to make it available at scale. It's exciting to work on something that will contribute to building future-proven encryption technologies for any connected device".

Quside's patented technology enables the generation of gigabit per second quantum random numbers. Using state-of-the-art photonic integration technologies, the products developed by the company can be miniaturised to chip level, allowing complete integration in any connected device. The company is working with key partners in different markets, such as data centres, to enable the next generation of future-proven security solutions to all Internet users. By using quantum technologies, the security levels that are achieved can resist a wide variety of upcoming threats, such as those arising from breakthroughs in crypto analysis or even the hacking capability of a hypothetical quantum computer. As Silvia Carrasco, Director of the Knowledge and Technology Transfer (KTT) unit at ICFO, comments "we actively support creation of spinoff companies by ICFOians, and use our extensive networks of investors to help them get started".

The Innovators Under 35 Summit Europe 2018 will be held at the worldwide renowned Station F, the biggest startup campus in the world, supported by Xavier Niel and located in Paris. Station F occupies a building designed by the French engineer Eugene Freyssinet. Inaugurated in 1929, the former rail depot has been extensively remodelled by architects Wilmotte and Associates to meet the needs of small startup companies.



Family Picture of the Innovators



Carlos Abellan with a chip from Quside