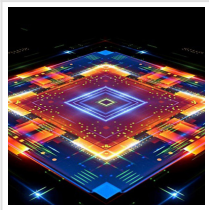
IBM And Mastercard among Partners of €11.1m Irish Quantum Project



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A new €11.1m project has launched with the aim of uniting Ireland's various quantum computer research groups.

Some of the biggest names in tech and research have joined forces with the aim of bolstering Ireland's quantum computer efforts. The €11.1m Quantum Computing in Ireland (QCoir) initiative will work on a software platform integrating multiple quantum bit technologies being developed in Ireland.

Unlike a traditional binary computer that uses binary 'bits' – which can be either one or zero – a quantum bit (qubit) can be one, zero or both at the same time. This gives quantum computers the power to solve some of the world's most complex problems in a fraction of the time that it would take a binary computer.

QCoir partners include Equal1 Labs, IBM, Rockley Photonics, Maynooth University, the Tyndall National Institute, University College Dublin and Mastercard. The project received €7.3m in funding under the Disruptive Technologies Innovation Fund, a €500m fund established under Project Ireland 2040.

"Quantum computing is seen as the future of computer technology," said Dr Emanuele Pelucchi, head of epitaxy and physics of nanostructures at Tyndall, based at University College Cork.

"It's computing built on the principles of quantum physics, creating, storing and accessing data at atomic and subatomic levels to create vastly powerful computers.

“Sources of multiple entangled photons uniquely allow for preparation of highly entangled quantum states. QCoir will leverage the on-chip photonic qubit platform based on site-controlled III-V quantum dots. These unique dots were developed at Tyndall.”

A ‘national quantum ecosystem’

Tyndall’s CEO, Prof William Scanlon, added that the partnership will set the foundations for a “national quantum ecosystem”.

“It brings together hardware and software providers with application users, and sees multinationals working side by side with researchers and SMEs,” he said.

“These kinds of industry and academic research partnerships are what will allow Ireland to build a quantum value proposition at international scale.”

Quantum computing research is continuing to progress in Ireland. Earlier this year, a team from Trinity College Dublin said it had taken a major step towards the ‘holy grail’ of quantum computing: a stable, small-scale quantum computer.

Read the original article on Siliconrepublic.