



RExQTCS Kick-off – 27-28 April 2026

Romanian Excellence Center in Quantum Technologies Enhancing Cybersecurity
National University of Science and Technology **POLITEHNICA Bucharest**

Press release

Quantum technologies (QT) are among the 18 critical and emerging technologies listed by the US National Security Council as being “of particular importance to the national security of the United States”. Throughout the entire world, both private and public investments have gone towards quantum technologies, with an **8.5 billion dollars** total cumulative global QT start-up investment, **42 billion dollars** total government investments announced, an estimated **market size by 2040 of up to 198 billion** dollars throughout various quantum technologies (quantum computing, quantum communication, quantum sensing), and a total economic value from quantum computing in 2035 of **up to 2 trillion dollars**, according to McKinsey & Company’s Quantum Monitor Report. A particularly significant impact of quantum computing is on digital security; according to the same report, the encryption algorithm most widely used in today’s **Internet communications (RSA) may be broken by quantum computers as early as 2027**. Nevertheless, quantum technologies have significant synergies and mutual impact with multiple cutting-edge technologies, including AI and machine learning, robotics, sustainability, with the most potential value driven by material engineering, pharmaceuticals, financial industry, and logistics.

Romania is now starting **RExQTCS, the Romanian Excellence Center in Quantum Technologies Enhancing Cybersecurity**, coordinated by POLITEHNICA Bucharest. Bringing together the leading Romanian researchers across POLITEHNICA Bucharest, Politehnica University Timisoara, Technical University Gheorghe Asachi Iasi, Technical University of Cluj-Napoca, West University of Timisoara, Alexandru Ioan Cuza University of Iasi, University of Craiova – **researchers with a track of 70,000+ citations, 20+ average H-index, with more than 290 past projects awarded totaling more than 110 million euro in funding** – the Center of Excellence is proposing **frontier and groundbreaking research in classical and post-quantum cryptography** and in **quantum technologies with impact in cybersecurity**, implementing high-impact technologies for Romania, novel protocols and critical solutions for the **future quantum internet**, and a **RExQTCS school** with more than 25 finalized PhD defences, **producing researchers who will push the frontier of science in quantum technologies**, and reaching through awareness programs high-school pupils, university students, public authorities, and the industrial ecosystem, **pushing Romania’s ambition to become Europe’s quantum technologies integrator in the following years**.

POLITEHNICA Bucharest is organizing on **April 27-28, 2026, the kick-off event for RExQTCS**. The event will include the **grand opening of RExQTCS, international keynote speakers, research sessions** in quantum technologies with impact in cybersecurity and related areas, **international quantum and cybersecurity projects**, and the **kick-off of ROGS – the Romanian Optical Ground Station** project, aiming to extend Romania’s quantum communication infrastructure with a **space-segment quantum key distribution connection**. Additionally, a **special session dedicated to computer science history** will be held by remarkable **Professor Nicolae Țăpuș** (POLITEHNICA Bucharest). The whole event is under the auspices of the **grand mentor of RExQTCS, Professor Virgil Gligor** (Carnegie Mellon University).

