**Kwantowa Kryptografia**

Quantum cryptography is the use of quantum mechanical properties to perform cryptographic tasks. … The advantage of quantum cryptography lies in the fact that it allows the completion of various cryptographic tasks that are proven or conjectured to be impossible using only classical (i.e. non-quantum) communication. For example, It is impossible to copy data encoded in a quantum state and the very act of reading data encoded in a quantum state changes the state. This is used to detect eavesdropping in quantum key distribution. (Wikipedia)

Na początek radzimy przeczytać krótki artykulik: http://www.wykop.pl/ramka/1881900/jak-dziala-kryptografia-kwantowa/

Podstawą jest książka "Wstęp do Informatyki Kwantowej" aut. Michel Le Bellac, ktora moge pozyczyc. Nalezy dokladnie przedstawic rozdzial 2.5, najpierw prezentując tradycyjny szyfr (ramka 2.3 i 5.3), a nastepnie, po wprowadzeniu kubita, szyfrowanie kwantowe.

Pozostale artykuly i prezentacje podaje przykladowo: może się ktoś zainteresuje (ale proszę zobaczyć na koniec jak wiele się w tej dziedzinie dzieje).

Literatura

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##### Nature, SEVEN DAYS 03 October 2018

##### Quantum CubeSat Scientists in the United Kingdom and Singapore plan to launch a quantum satellite in late 2021, they announced on 27 September. The satellite, a lightweight CubeSat, will be designed to demonstrate quantum key distribution (QKD), a technology that harnesses the quantum properties of light to provide inherently secure communication. Together, the two countries’ governments plan to invest 18 million Singapore dollars (US$13 million) in the project, known as QKD Qubesat, which will transmit secure messages between ground stations in the United Kingdom and Singapore. In 2016, a team led by Pan Jianwei at the University of Science and Technology of China in Hefei became the first to achieve satellite-based QKD, which significantly boosts the distance over which secure communication can happen.