

## Invitation to quantum computing

**Doc. Mgr. Mário Ziman, PhD.**

*Institute of Physics, Slovak Academy of Sciences, Bratislava, Slovak Republic*

We will discuss how quantum concepts can be used to perform computation. Quantum computing enters when zeros and ones are replaced by quantum bits and logical gates are replaced by quantum ones. We will explain how quantum evaluation of any function works and provide an example qualitatively improving the computation efficiency. Along with this main message we will learn about the concepts of elementary quantum gates, universality and complexity.