<Abstract>

FAQs on Quantum Computation

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The theory of quantum computation is an extensive subject and has been developed in many different flavours. The most common model of quantum computation is the quantum circuit model, which is the straightforward generalisation of its classical counterpart and underpins the theory of quantum error correction. The main focus of this talk will be on the 'software-side' of the quantum computer, rather than the 'hardware-side'. I aim to make the audience, assumed to have the knowledge of undergraduate-level quantum mechanics, understand in what sense the quantum computation is believed to be feasible. I will try to avoid technical details and focus on conveying conceptual ideas. The talk will be given in Korean for students unless requested otherwise