

## **Prospects for Quantum Computers**

David DiVincenzo

*RWTH Aachen / Forschungszentrum Jülich*

The basic principles of quantum computation were enunciated twenty years ago, and within ten years there was good motivation to build one, and a basic idea of the physical challenges that would need to be overcome to achieving working quantum computation in the lab. Since then there has been steady progress in achieving this goal, involving striking advances in the solid state control of single quanta. I will give my overview of the status of spin qubits and superconducting qubits, and indicate where they may be going in the future.