Quantum Computing

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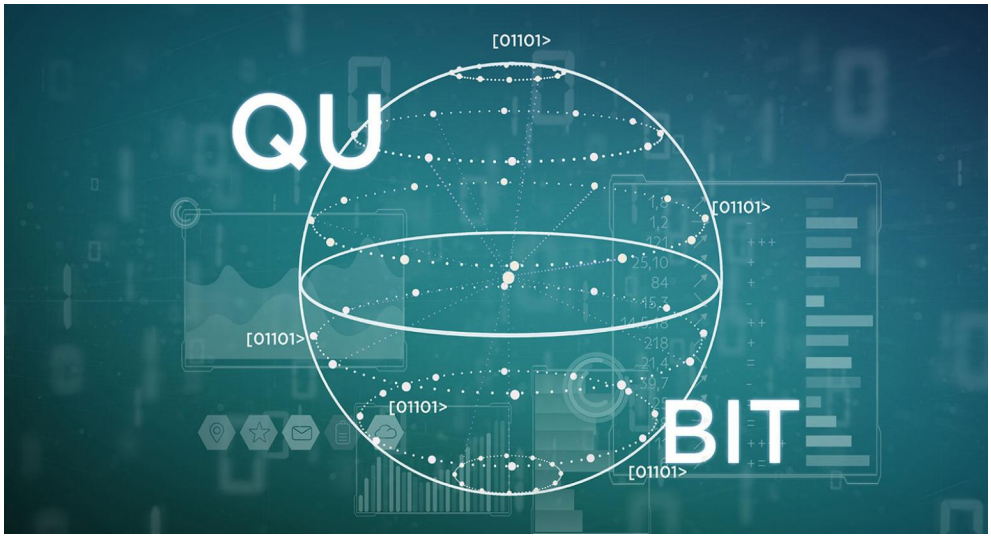

If you can fathom quantum mechanics without getting dizzy, you don't get it Et kvantebitte spring nærmere supercomputeren

- Niels Bohr

Contents

Chapter 0

Plan of Action

Week 0	Overview of Quantum Computing and Algorithms
Week 1	Review of Quantum Mechanics and Computer Science
Week 2	Quantum Circuits
Week 3	Quantum Fourier transform and Search algorithms
Week 4	Physical realization of Quantum Computers
Week 5	Quantum noise, operations and distance measures
Week 6	Quantum Error Correction
Week 7	Quantum Error Correction continued, and QIT started
Week 8	Quantum Information Theory

- The above schedule is tentative, and bound to change depending on the complexity and nature of the topic going on.
- The book "Quantum Computation and Quantum Information" by Michael A. Nielsen and Isaac L. Chuang is going to be religiously followed for this SoS. Any other material referenced will be mentioned at the end of the document.
- The weekly updated notes will be uploaded at
  - the github repository
  - my website

Chapter 1

Introduction and Overview of Quantum Computing