

Dortmund, 27. März 2018

EINLADUNG

An der Fakultät für Informatik wird

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D-Wave Systems

einen Vortrag halten über

Performance Evaluation for Annealing Based Quantum Computers

ORT: OH 14, E23
ZEIT: Dienstag, 10. April 2018, 12:15 Uhr

ZUSAMMENFASSUNG:

A D-Wave quantum processing unit (QPU) implements an algorithm in hardware that exploits quantum properties (such as superposition and entanglement), to heuristically solve instances of the Ising model problem, which may be more familiar as quadratic unconstrained binary optimization (QUBO). The current 2000Q model contains 2000 qubits.

The algorithmic approach it uses, called Quantum Annealing (QA), falls in the adiabatic quantum model of computation (AQC), which is an alternative to the more familiar gate model (GM) of quantum computation. Relatively little is known theoretically about QA and AQC; but on the other hand the existence of quantum computing systems of reasonable size make empirical approaches to performance analysis possible.

I will give an introductory overview of quantum annealing and D-Wave processors, show how to solve Max Cut problems on these novel computing platforms, and survey what is known about performance on this problem. No background in Physics is assumed.

**ZU DIESEN VORTRÄGEN LADEN HERZLICH EIN
DIE DOZENTEN DER FAKULTÄT FÜR INFORMATIK**