Tohoku Univ. Technology

Sparse-Compatible Algorithm for Simulated Quantum Annealing (SQA)

Practical-Speed SQA Execution for Automated Guided Vehicles (AGV)

Overview

To simulate quantum annealing on classical computers, Simulated Quantum Annealing (SQA) based on the Ising model has gained attention. The inventors have developed a parallel algorithm that enables multi-level parallel processing of SQA with a fully connected Ising model, implemented on a Field Programmable Gate Array (FPGA) (related work [1]).

This invention supports sparse coupling models and proposes an algorithm that allows for faster analysis of classical spin systems based on the Ising model. This makes it possible to execute SQA at practical speeds using FPGA acceleration.

Features・Outstandings

The application is unpublished. Technical information, including the patent application document, will be disclosed after concluding a technology transfer agreement. Please feel free to contact us.

Product Application

- Automation of logistics in factories and warehouses using Automated Guided Vehicles (AGV)

Related Works

[1] JOURNAL OF LATEX CLASS FILES, VOL. 14, NO. 8, AUGUST 2015

IP Data

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