

Day 1 (Poster B)

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Title: Pattern formation simulation using an Ising Machine

Abstract:

In a ferromagnetic Ising system, domain pattern formation occurs after a sudden quench. Using an Ising machine in a usual manner, one obtains the ground state, i.e., the stationary state of a domain pattern. What we propose here is the method to simulate the pattern formation dynamics by an Ising machine. We demonstrate that the method reproduces domain patterns similar to those simulated by the Monte Carlo method. The point is mapping dynamics to a variational problem. Thus, the method can be applied to other types of problems if mapped to variational problems.