

Reassessments of the Boltzmann machine

[Kazuharu Kobayashi](#), [Masahiro Kanazawa](#)

Abstract

We investigate the Boltzmann machine (BME) on the boundary. We have a simple and explicit formula for their collision probability. We consider the connecting function for third-order propagators of the BMEs. We have proved that the first-order wave function obeys the weak coupling scaling of the BMEs. The resulting equations are valid in any value of the scattering index. We have also found that the BMEs are invariant under the to-be-assumed transformation of the scattering index.