



Contribution ID: 217

Type: **Talk**

Initial tensor construction and dependence for tensor renormalization group

Tuesday, 30 July 2024 15:05 (20 minutes)

We propose a method for the construction of the initial tensor representation and its dependence on the tensor renormalization group (TRG). The TRG method is a numerical calculation technique that utilizes tensor network representations of physical quantities to investigate physical properties without encountering the sign problem.

To apply the TRG method, it is essential to make a typical (locally connected) tensor network suitable for recursive coarse-graining. In this talk, we present a systematic approach for translating a general tensor network into this typical tensor network. Additionally, we discuss the dependence on the details of the initial tensor network.

Primary author: NAKAYAMA, Katsumasa (Riken)

Co-author: SCHNEIDER, Manuel (National Yang Ming Chiao Tung University (NYCU), Taiwan)

Presenter: NAKAYAMA, Katsumasa (Riken)

Session Classification: Algorithms and artificial intelligence

Track Classification: Algorithms and Artificial Intelligence