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(I) Why statistical physics is the best course you take: Introduction to quantum information with tensor networks

Thursday 22 June 2023 09:00 (30 minutes)

I cover an introductory article I wrote with a group of students in the French language on the concepts of quantum information in tensor network algorithm. The resulting entanglement renormalization algorithms are known to be highly efficient for both classical and quantum lattice problems in a variety of use cases. I review best practices for creating such an introductory article, when they are necessary, as well as the physics. I then trace how this article has been used by future students.

[1] T.E. Baker, S. Desrosiers, M. Tremblay, M.P. Thompson, Méthodes de calcul avec réseaux de tenseurs en physique, *Can. J. Phys.* **99**, 4 (2021) [*ibid.* Basic tensor network computations in physics, arxiv: 1911.11566]

Keyword-1

Entanglement renormalization

Keyword-2

Quantum Information

Keyword-3

Introduction

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