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**The tensor network theory library.** (English) Zbl 1459.81004

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**Summary:** In this technical paper we introduce the tensor network theory (TNT) library – an open-source software project aimed at providing a platform for rapidly developing robust, easy to use and highly optimised code for TNT calculations. The objectives of this paper are (i) to give an overview of the structure of TNT library, and (ii) to help scientists decide whether to use the TNT library in their research. We show how to employ the TNT routines by giving examples of ground-state and dynamical calculations of one-dimensional bosonic lattice system. We also discuss different options for gaining access to the software available at .

**MSC:**

**81-04** Software, source code, etc. for problems pertaining to quantum theory

Cited in 4 Documents

**81P68** Quantum computation

**Software:**

[ITensor](#); [evoMPS](#); [GitHub](#); [NetCDF](#); [VirtualBox](#); [DMRG++](#); [ALPS](#); [Tensor Network Theory](#); [snake](#)

**Full Text:** [DOI](#) [arXiv](#)

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