

Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

Matrix Product State approach to quantum Hall quasielectrons

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Matrix product state (MPS) techniques have been successfully used to study quasiholes in different quantum Hall states. In particular it has provided a numerically very efficient way to calculate statistical braiding phases. So far it has been hard to generalize these methods to also describe quasielectrons. Using recently developed techniques for constructing explicit wave functions for the abelian quantum Hall hierarchy, we suggest a new way to construct MPS wave functions for states containing quasielectrons, and also for Abelian hierarchy states.

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Date submitted: 06 Nov 2015

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