

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Markovian marginals ISAAC KIM, IBM T.J. Watson Research Center

— We introduce the notion of so called Markovian marginals, which is a natural framework for constructing solutions to the quantum marginal problem. A set of reduced density matrices obeying a certain set of local constraints necessarily has a global state that is compatible with all the given reduced density matrices. This leads to an algorithm to study interacting quantum many-body systems in two spatial dimensions.

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Date submitted: 11 Nov 2016

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