

Quantum maximum entropy principle and involved semigroups

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Abstract

We review the concept of quantum maximum entropy principle (QMEP) introduced by P. Degond and C. Ringhofer, and illustrate its use in the derivation of equations for quantum fluids. The central role played by the linear or nonlinear semigroup associated to the QMEP state will be stressed. Examples of applications to gases of bosons, fermions and spinors will be briefly discussed.