

# **"Quantum Monte Carlo approach to solving the many-electron Schrödinger equation"**

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We formulate the electronic Schrödinger equation in terms of a stochastic population dynamics which is played on the appropriate fermionic (antisymmetric) Hilbert space. The resulting algorithm is exact in certain limits, and can be implemented conveniently on massively parallel machines. There are however non-trivial load balancing problems in scaling to the 10000+ processor limit. Nevertheless, the algorithm represents a promising direction for the study of electronic systems which have thus far evaded solution.