Seminar/Talk

Hartree-Fock approximation for the time-evolution of extended Fermi gases at high density

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Host: Laszlo Erdös

We consider a gas of N fermions at large (but fixed, independent of N) density. We show that the many-body time-evolution can be approximated by the nonlinear Hartree-Fock equation. We establish convergence at the level of reduced one-particle density matrices, proving global bounds in the Hilbert-Schmidt norm. For fermions with relativistic dispersion, we also obtain convergence for the expectation of local observables. This is a joint work with Luca Fresta and Marcello Porta.

Thursday, April 3, 2025 04:15pm - 05:15pm
Office Bldg West / Ground floor / Heinzel Seminar Room (I21.EG.101)

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