**Few-body aspects of dilute Fermi gases**[1]

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Dilute ultracold atomic Fermi gases and neutron matter are to a good approximation described by the same microscopic Hamiltonian if the s-wave scattering length is much larger than any other length scale of the system. This talk discusses solutions to the few-body Schroedinger equation for the trapped two-component Fermi gas with even and odd number of particles. Energies and structural properties will be presented as functions of the interaction strength, the number of fermions and the confining geometry. Our results shed light on the pairing physics and provide much needed benchmarks for few-body systems with short-range interactions that are important for the atomic, nuclear, and condensed matter physics communities.