

Abstract for an Invited Paper  
for the MAR06 Meeting of  
The American Physical Society

**One-dimensional spin-polarized fermions**

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The fermionic Tonks-Girardeau (FTG) gas is a spin-aligned one-dimensional Fermi gas with infinitely strong attractive zero-range odd-wave interactions. This model describes experiments on ultracold atomic gases subjected to tight quasi-1D waveguides and close to a Feshbach resonance. I will report on the recent investigations of the FTG gas under different trapping conditions (harmonic and ring traps) and in the presence of disorder. In particular I will discuss the pairing properties of this gas, the possibility of metastable current flows and the response to rotation. Finally, for a gas initially under harmonic confinement I will show that during an expansion the momentum distribution undergoes a “dynamical bosonization,” i.e., approaches the one of an ideal Bose gas, without violating the Pauli exclusion principle.