I will discuss viscous dissipation in a single-channel one-dimensional quantum liquid. This system is commonly described in terms of the Luttinger liquid theory, in which elementary excitations are non-interacting bosons. This simplest model does not describe relaxation of elementary excitations, and will be modified to account for the coupling of the bosonic degrees of freedom. The resulting theory is formulated in terms of excitations with Fermi statistics with very long life times. I will then apply this approach to the evaluation of the bulk viscosity of the system. Unlike the three-dimensional Fermi liquid, in which the bulk viscosity vanishes in the low temperature limit, our result diverges as $1/T^3$. 

**Tuesday April 10, 2018**

**4:00 pm**

**Room 334 JFB**