1104-35-16 **Gang Zhou*** (gzhou@caltech.edu), California Institute of Technology, Mathematics, Mail Code 253 37, Pasadena, CA 91106, and **Juerg Froehlich**, Institut f. Theoretische Physik, HIT K 42.1, Wolfgang-Pauli-Str. 27, 8093 Zurich, Zurich, Switzerland. *motion of an invading heavy tracer particle in a Bose gas.*

I will present recent results on a non-relativistic Hamiltonian model of quantum friction, about the motion of an invading heavy tracer particle in a Bose gas exhibiting Bose Einstein condensate. We prove the following observations: if the initial speed of the tracer particle is lower than the speed of sound in the Bose gas, then in large time the particle will travel ballistically; if the initial speed is higher than the speed of sound, the it will converge to the speed of sound. In both regimes the system will converge to some inertial modes. Joint works with Juerg Froehlich, Michael Sigal, Avy Soffer, Daneil Egli and Arick Shao. (Received May 31, 2014)