1051-35-78 Luis A Caffarelli* (caffarel@math.utexas.edu), 1 University Station/C1200, Austin, TX 78712. Some non linear problems involving non local diffusions.

We will review several mathematical issues involving non linear problems with non local diffusions: divergence versus on divergence, porous media type equations, problems with constraints and optimal control. (Received August 13, 2009)