1113-35-285 **Christopher G Lefler***, cgl9b@virginia.edu, and **Marcelo Cavalcanti**, **Wellington Correa** and **Irena Lasiecka**. *Well-posedness and Uniform Stability for Nonlinear Schrödinger Equations with Dynamic/Wentzell Boundary Conditions.*

The Shrödinger equation with a defocusing nonlinear term and dynamic boundary conditions defined on a smooth boundary of a bounded domain $\Omega \in R^N, N = 2, 3$ is considered. Local wellposedness of strong H^2 solutions is established. In the case $N = 2$ local solutions are shown to be global. In addition, existence of weak H^1 solutions in dimensions $N = 2, N = 3$ is also shown. The energy corresponding to weak solutions are shown to satisfy uniform decay rates under appropriate monotonicity conditions imposed on the nonlinear terms appearing in the dynamic boundary conditions. The proof of wellposedness is critically based on converting the equation into a Wentzell boundary value problem associated with Shrödinger dynamics. The analysis of this later problem with inhomegenous boundary data allows us to build a theory suitable for the treatment of the dynamic boundary conditions. (Received August 25, 2015)