1057-35-204   **Shu-Ming Sun*** (`sun@math.vt.edu`), Department of Mathematics, Virginia Tech, Blacksburg, VA 24061. *Initial Boundary Value Problems of the Schrodinger Equation.* Preliminary report.

The talk will focus on the initial- and boundary-value problems (IBVP) of the Schrodinger equation posed in a quarter plane and on a bounded interval with nonhomogeneous boundary conditions. The problems arise naturally in certain circumstances when the Schrodinger equation is used as a model for waves and a numerical scheme is needed. It will be shown that the IBVP is locally and globally well-posed in certain Banach spaces. The local well-poseness results are sharp, while the partial global well-posedness is obtained. The ideas used for the local well-posedness is similar to our early results on the KdV equation. (This is a joint work with J. Bona and B. Zhang) (Received January 22, 2010)