1106-VL-1423 **Stephanie A. Blanda*** (sab466@psu.edu), Department of Mathematics, The Pennsylvania State University, University Park, PA 16802. *The Interface of Two Fluids Under a Shear Flow.* Preliminary report.

The generation of waves by wind has long been a topic of interest. However, it has only been in the past 50 years or so that significant progress has been made in understanding the effect of wind on water waves. Despite this progress, there is still much we do not understand about the interaction. Our goal is to look at dynamics that have been previously ignored and see if they help us better predict wave growth. In particular, we focus on the effect of viscosity on the overall growth/decay rate of waves. Here we will consider the coupled air/water system as a viscous 2-layer system. In this talk, I will describe the derivation of the equations for the linear theory dealing with the interface of two immiscible, incompressible, viscous fluids under a shear flow and discuss the numerical methods we have used to solve these equations. (Received September 12, 2014)