1163-35-1090   **Yoichiro Mori*** (`y1mori@sas.upenn.edu`), Philadelphia, PA 19104. *The 2D Peskin Problem of an Immersed Thin Elastic Structure in Stokes Flow.*

The Peskin problem, in which a thin elastic structure interacts with the surrounding fluid, is a prototypical problem in fluid-structure interaction, and is arguably one of the simplest of such problems. In this talk, I will discuss our efforts on the well-posedness and behavior of the solution for different variants of this problem in near-critical and critical function spaces. The work to be presented is a result of collaborations with Analise Rodenberg, Daniel Spirn, Eduardo Garcia-Juarez and Robert Strain. (Received September 14, 2020)