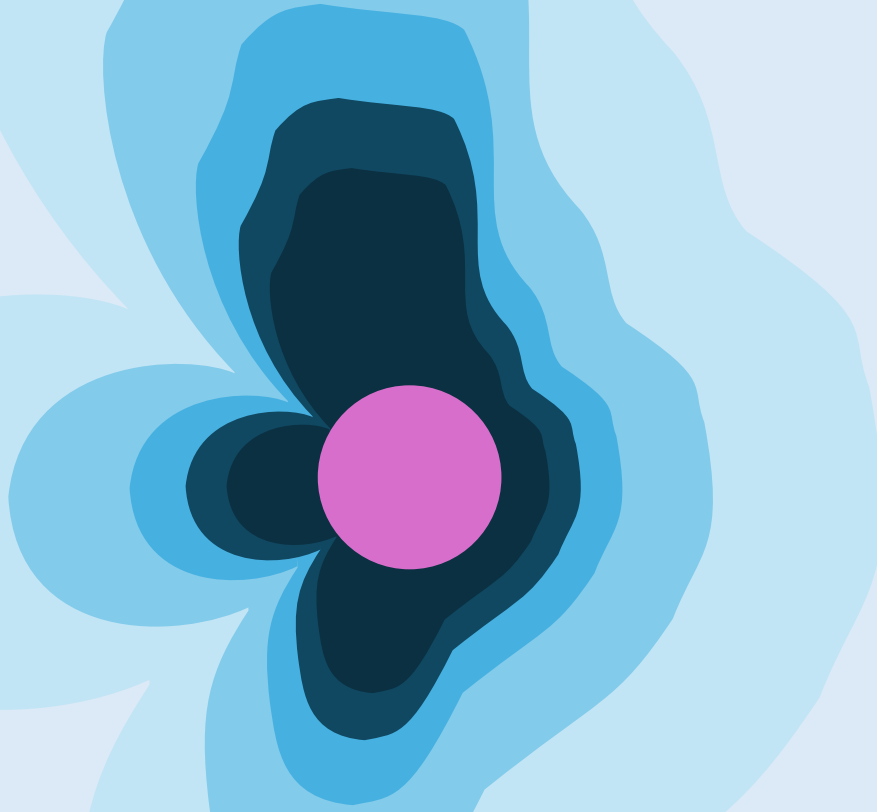


# **MAPPING THE SURFACE PRESSURE DISTRIBUTION ON THE SURFACE OF A ROTATING CYLINDER**

**Nathan Eller**



Magnus effect is the phenomenon where a rotating cylinder in cross flow generates lift. It is leveraged in many applications such as baseball, sailing boats, wind power, and experimental aircraft. While the pressure distribution of airfoils is well studied, limited experiments have been performed to determine the pressure distribution of a rotating cylinder. The research is an effort to broaden the tested flow conditions and refine existing results. To accomplish this, a uniquely developed pressure sensor system is integrated inside a rotating cylinder test model for the Cal Poly Low-Speed Wind Tunnel. The seminar presents the work thus far including system performance, validation, and design.

**Thesis Seminar**

**3.14.2024**

**11 AM in 192-322**