

## Flat Plate

Vortex of strength  $\Gamma = -0.02$  started upstream at  $(-4.5, 0.04)$ . Graph below shows comparison of obtained results to the analytical lift response of a flat plate to a passing vortex. Note that the lift for both analytical and numerical results have been 'normalized' by the strength of the vortex  $\Gamma$ .

$$L = \rho \Gamma \frac{c}{2} e^{-kh} (-iS(k)) \quad (1)$$

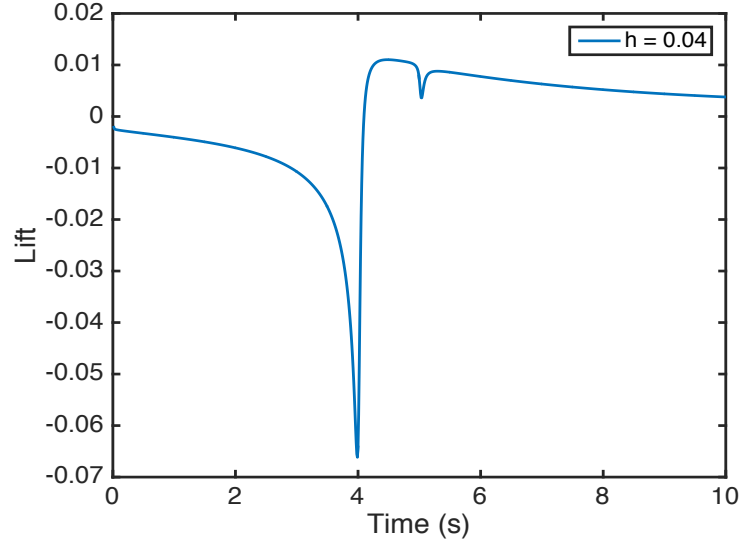


Figure 1: Lift Curve Response of Flat Plate to Passing Vortex

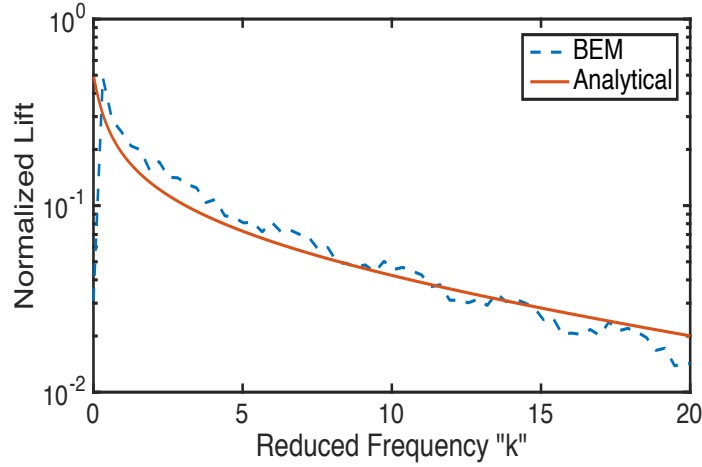


Figure 2: Analytical and BEM Spectrum of Lift for Vortex Passing Flat Plate