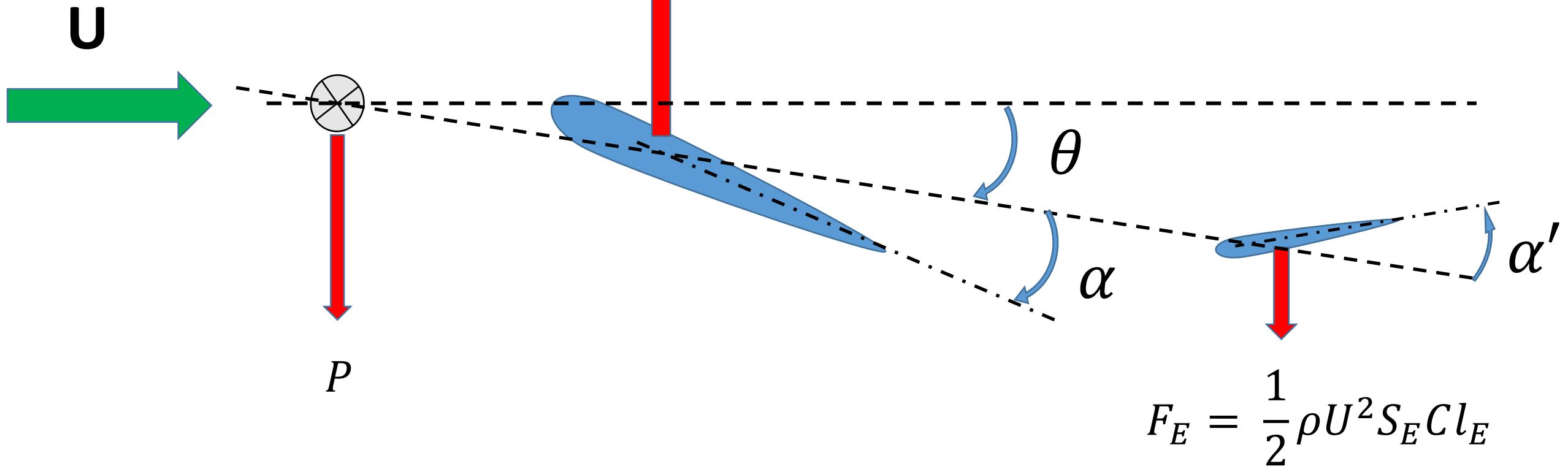$$F_A = \frac{1}{2}\rho U^2 S_A Cl_A$$

$$F_E = \frac{1}{2}\rho U^2 S_E Cl_E$$

$$Cl_A = Cl_{A0} + C_A * (\theta + \alpha)$$

$$Cl_E = Cl_{E0} + C_E * (\theta + \alpha')$$

$$M_G = \frac{1}{2}\rho U^2 [aS_A(Cl_{A0} + \alpha C_A) + bS_E(Cl_{E0} + \alpha' C_E) + \theta(aS_A C_A + bS_E C_E)]$$

$$M_G = \frac{1}{2}\rho U^2 \left[\theta(aS_A C_A + bS_E C_E)\right]$$