

NUMERO DI REYNOLDS (IDRAULICA)

$$Re = \frac{\rho V D}{\mu}$$

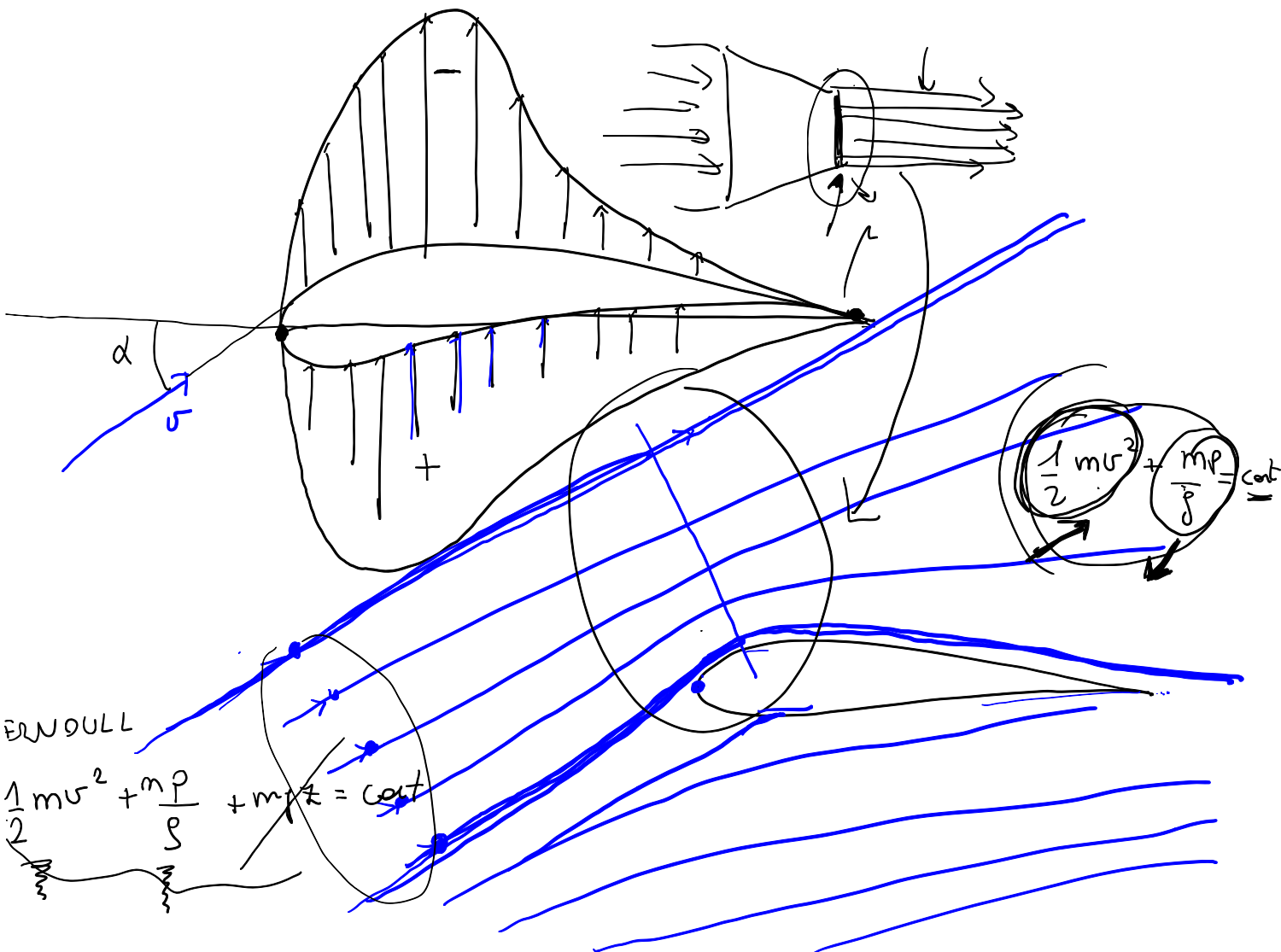
VISCOSITÀ DINAMICA

$$\nu = \frac{\mu}{\rho}$$

VISCOSITÀ CINEMATICA

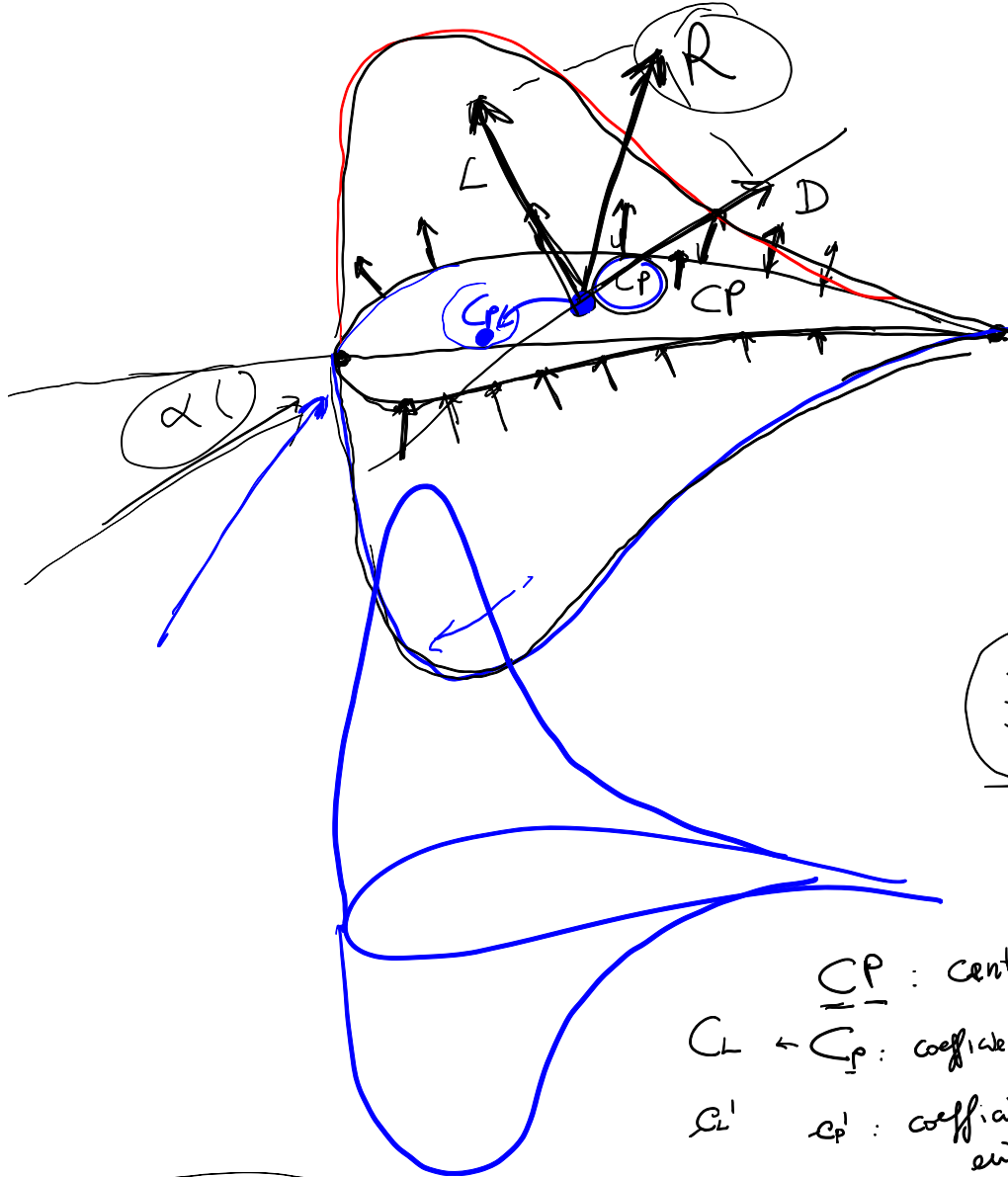
$$Re = \frac{V D}{\nu}$$

$Re < 2000 \Rightarrow$ REGIME LAMINARE
 $Re > 3000 \Rightarrow$ REGIME TURBOLENTO



BERNOULLI

$$\frac{1}{2} \rho v^2 + \rho p + \rho g z = \text{cost}$$



$$P = \frac{F}{A}$$

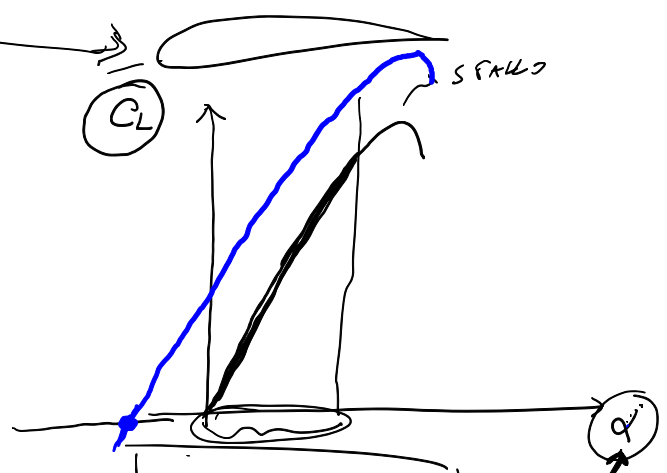
$$\vec{F} = \rho \cdot A \cdot L$$

\underline{CP} : Centro di Pressione
 $C_L \leftarrow \underline{CP}$: coefficiente di portanza
 $C_L' \quad c_p'$: coefficiente angolare di portanza

$$C_L = \frac{L}{\frac{1}{2} \rho V^2 S}$$

ρ : densità
 V : velocità
 S : superficie alare

$$L = C_L \cdot \frac{1}{2} \rho V^2 S$$



x UN
 PROFILO INFINITO

$$C_L = c_l'(\alpha')$$

coefficiente angolare di portanza

$$C_L = c_l' \cdot \alpha'$$

$$c_l' = 5.43 \quad (x)$$