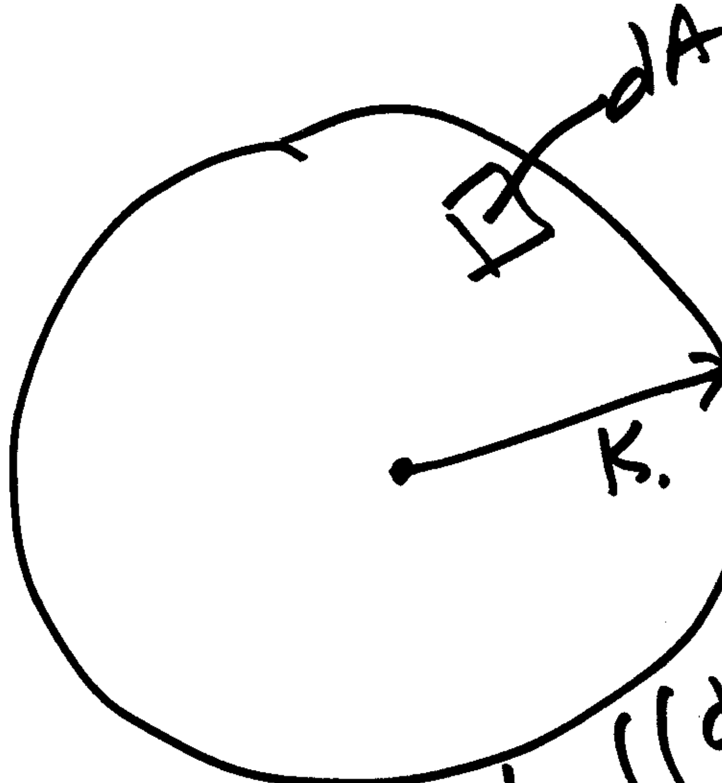
Prof. Haridas
date. 23/2/11
Lec-23




$$e(k) = \frac{1}{2} \iint \phi_{ii}(\bar{k})\, dA$$

$$e = \int_0^\infty e(k)\, dk.$$

$$u_k \frac{\partial u_i}{\partial x_k} = -\frac{1}{\rho}\frac{\partial p}{\partial x_i} + \nu \frac{\partial u_i}{\partial x_l \partial x_l} - \frac{\partial (\overline{u'_i u'_k})}{\partial x_k}$$


$$\xi_k = x_k|_{r_2} - x_k|_{r_1}$$

$$x_{km} = \frac{1}{2}\left(x_k|_{r_2} + x_k|_{r_1}\right)$$

$$\hat{u}_k \frac{\partial \hat{u}_i}{\partial x_k}$$

$$= (u_k + u'_k)\frac{\partial}{\partial x_k}(u_i + u'_i)$$

$$= (u_k + u'_k)\frac{\partial u_i}{\partial x_k} + (u_k + u'_k)\frac{\partial u'_i}{\partial x_k}.$$

$$= \quad '' \quad + u_k \frac{\partial u'_i}{\partial x_k} + u'_k \frac{\partial u'_i}{\partial x_k}$$

$$= \quad '' \quad + u_k \frac{\partial u'_i}{\partial x_k} + \frac{\partial u'_i u'_k}{\partial x_k} - \cancel{u'_i \frac{\partial u'_k}{\partial x_k}}^{=0}$$