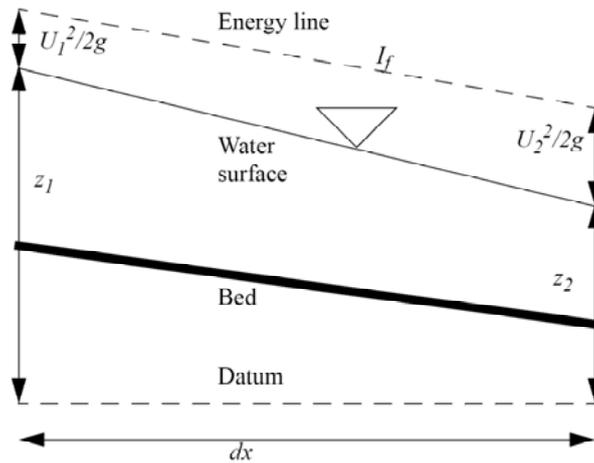


Stationary non-uniform flow



Formula for steady water surface profile

$$z_1 - z_2 = \Delta z = I_f \Delta x + \left(\frac{U_2^2}{2g} - \frac{U_1^2}{2g} \right)$$

$$I_f = \frac{U^2}{M^2 R^{\frac{4}{3}}} \quad \frac{dy}{dx} = \frac{I_f - I_0}{1 - Fr^2}$$

Example

Water level over distance

