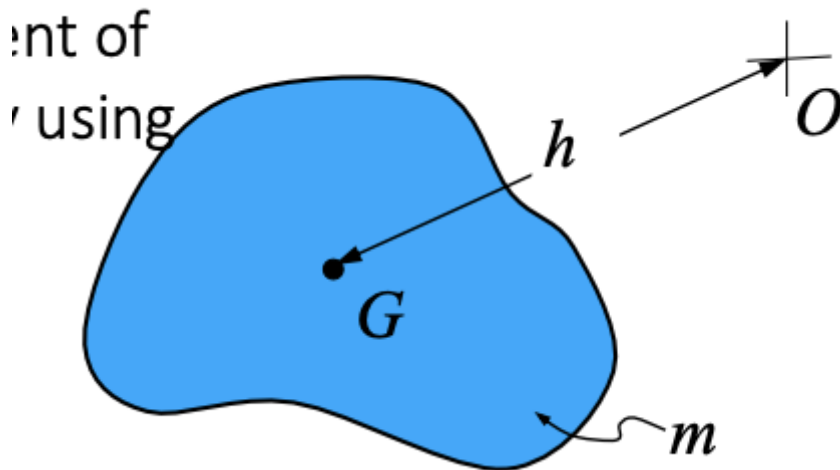# 3: Parallel-Axis Theorem

- If the moment of inertia of the body about an axis passing through the mass centre is known, then the moment of inertia about other *parallel* axis can be determined by using the *parallel-axis theorem*.

-

  ent of

  ' using

  h

  O

  G

  m

- $I_O = I_G + mh^2$

4: Moment of inertia operations

- The moment of inertia of the body can be determined by adding or subtracting.

-

  2

  1

  $=$

  1

  $+$

  2

  $I_G = I_{G1} + I_{G2}$

  I_{G1}

  I_{G2}

  $=$

  $-$

  $I_G = I_{G1} - I_{G2}$

  I_{G1} Solid disk

  I_{G2} hole