

Mathematics Awareness Month - April 2010

Mathematics and Sports

What equations describe the mechanics of a golf swing?

Mathematics can answer this question and many others.

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$$A\ddot{\theta} + B\ddot{\phi}\cos(\phi - \theta) - B\dot{\phi}^2\sin(\phi - \theta) = -\tau_0 + \tau_h$$
$$B\ddot{\theta}\cos(\phi - \theta) + B\dot{\theta}^2\sin(\phi - \theta) + C\ddot{\phi} = -\tau_h$$

$$v_{ball} = v_{club} \frac{(1 + c_R)m_{club}}{m_{club} + m_{ball}}$$

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