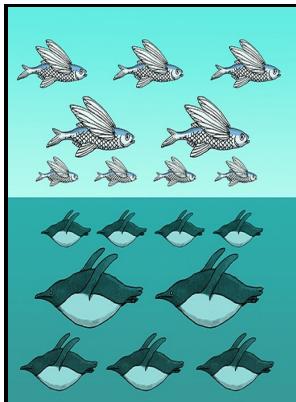


# Mechanics of swimming and flying

**Courant Institute of Mathematical Sciences, New York University - Mechanics of swimming and flying (1981 edition)**



Description: -

- Navier-Stokes equations.

Fluid dynamics -- Mathematical models.

Animal swimming -- Mathematical models.

Animal flight -- Mathematical models. Mechanics of swimming and flying

-Mechanics of swimming and flying

Notes: Bibliography: p. 153-156.

This edition was published in 1977



Filesize: 66.95 MB

Tags: #Mechanics #of #swimming #and #flying #(Book, #1977) #[vivchar.tom.ru]

## Mechanics of Swimming and Flying

The specific action-reaction mechanics at work here involves the creation of swirling vortices around the swimmer, which is part of the physics taking place.

## Mechanics of swimming and flying

In the figure below the buoyant force acts at a point that is to the right of the center of mass and as a result will cause the swimmer to rotate counterclockwise. By moving his hand along an optimal path, as shown, and adjusting the orientation of his hand throughout i. At this point rotational equilibrium is reached.

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For a swimmer moving at constant speed through the water the thrust force is equal to the drag force.

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Both these types are studied, with emphasis on the unsteady character of natural movements.

## Mechanics of Swimming and Flying

However, the literature suggests that the drag force experienced by the upper arm is negligible, which means that its relative velocity through the water is too low to produce significant drag force. The effect of leg kick on sprint front crawl swimming, Journal of Sports Sciences, 2013.

## Mechanics of swimming and flying (Book, 1977) [vivchar.tom.ru]

Out of these four, Front Crawl is the fastest mode of swimming. Van Den Berg, and A.



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