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## A review on aerodynamics of nonflapping bird wings (Article)

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## Abstract

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Birds are known for their agility, manoeuvrability, and flexibility during flight. These features allow their ability to fly under a large range of flight conditions. Bio flyers and bio aerodynamic/fluid surfaces have inspired many to perform experiments and simulations as well as to relate their results to engineering applications. Wings specifically have been the most inspirational element. Aerodynamic forces, structure, unsteady flow, fluid-structure interaction, flow control, flow adaptive elements and mechanisms, flow vortices, flapping mechanisms, and hovering flight of birds are examples of research interests. This paper presents an overview of prior analyses and experiments on the aerodynamic performance and mechanical properties of birds in steady non-flapping flight. © 2016. Journal of Aerospace Technology and Management. all right reserved.

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