

Abstract Submitted  
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**Kinematics and dynamics of sphenisciform wings** FLAVIO NOCA, FABIEN CRISINEL, PIERRE MUNIER, hepia — Three-dimensional scans of three different species of taxidermied penguins (*Aptenodytes patagonicus*, *Pygoscelis papua*, and *Spheniscus magellanicus*) have been performed. A three-dimensional reproduction of an African penguin (*Spheniscus demersus*) wing was manufactured and tested in a hydrodynamic channel. A six-degree-of-freedom robot was programmed to perform the three dimensional kinematics, obtained from actual footage. A six-component force balance was used to retrieve the dynamics of the wing motion. Results will be presented and discussed.

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