

An investigation into the use of aspects of Biomimicry in ship rudder design

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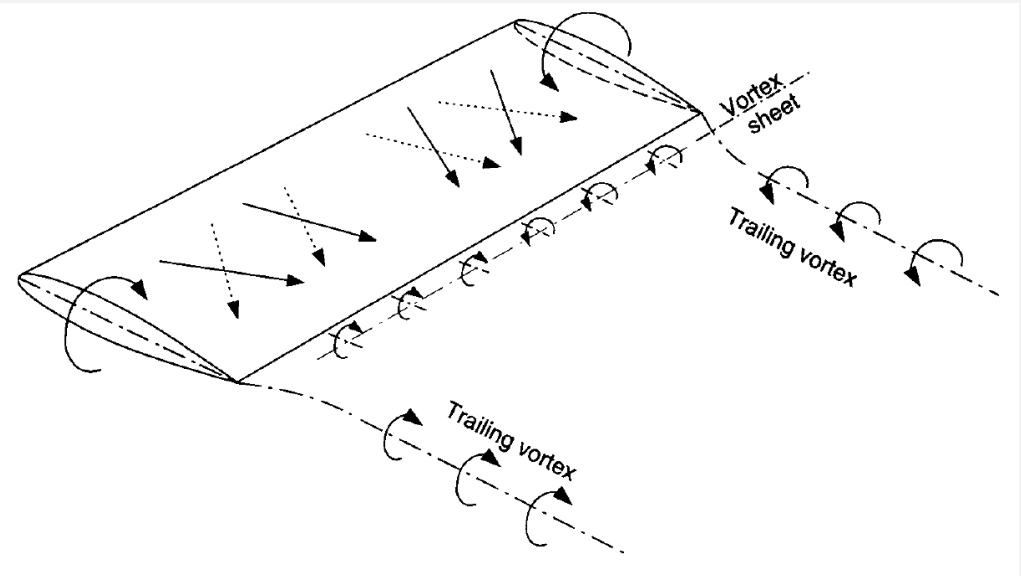
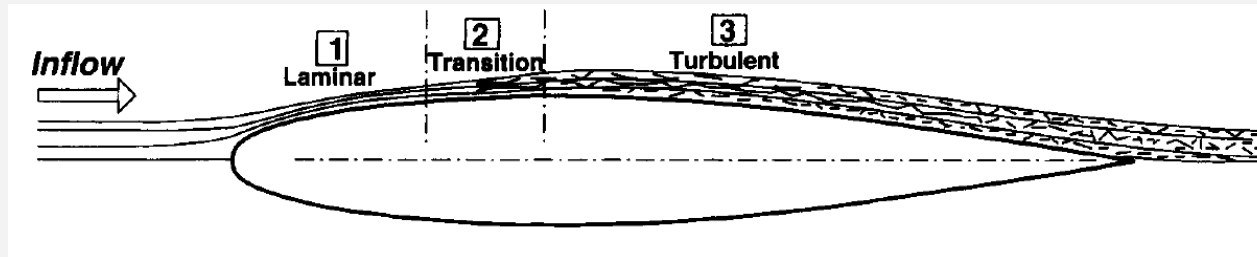
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Background to Research

- UK Shipping
- Manoeuvrability

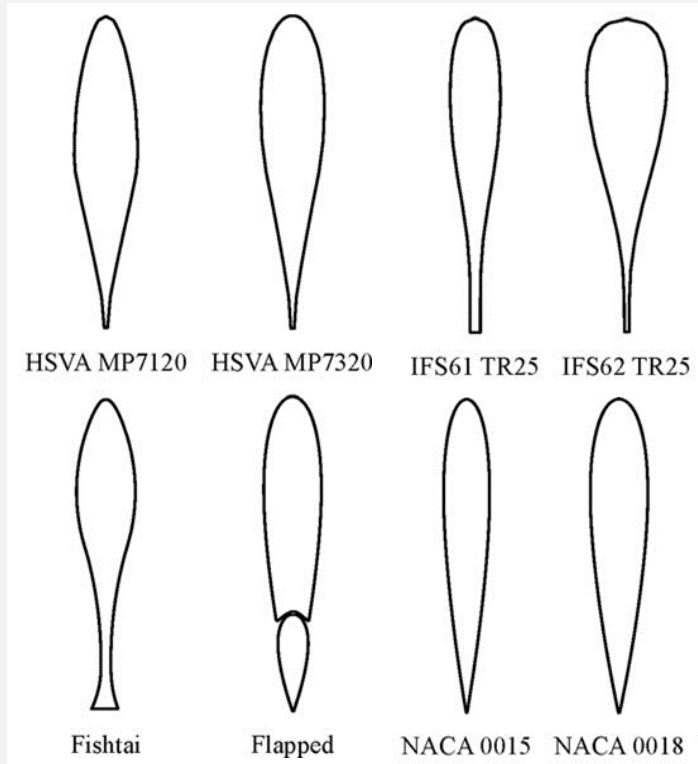


Rudder Hydrodynamics



Molland, A. F. & Turnock, S. R., 2007.
Marine Rudders and Control Surfaces.
Oxford: Elsevier.

Existing Rudders



Molland, A. F. & Turnock, S. R., 2007. *Marine Rudders and Control Surfaces*. Oxford: Elsevier.



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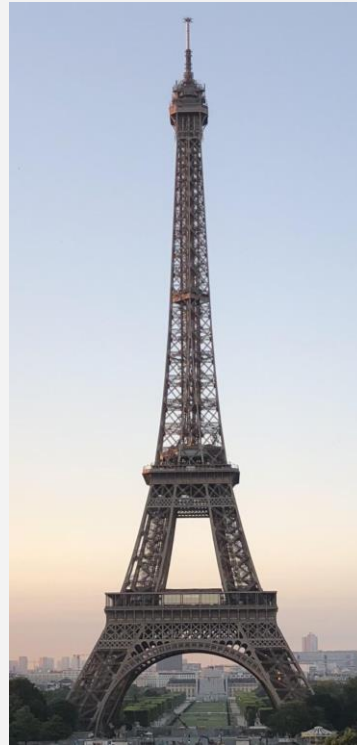
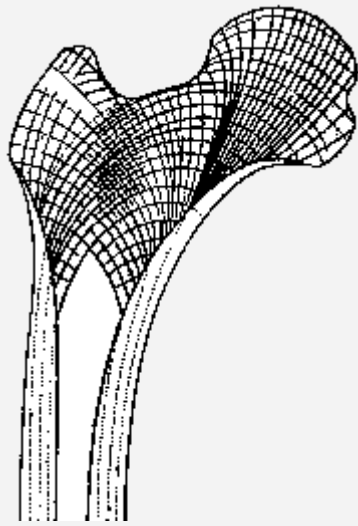


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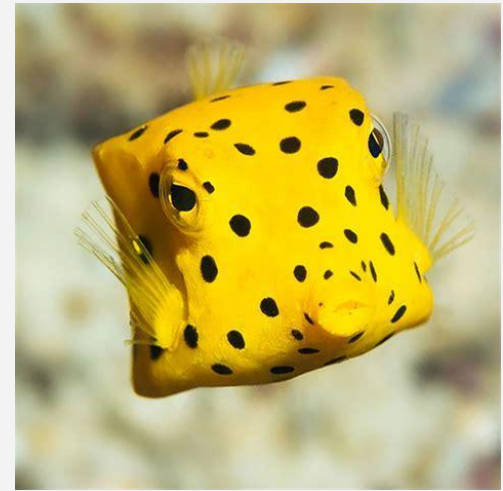


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What is Biomimicry?



Bio-inspiration



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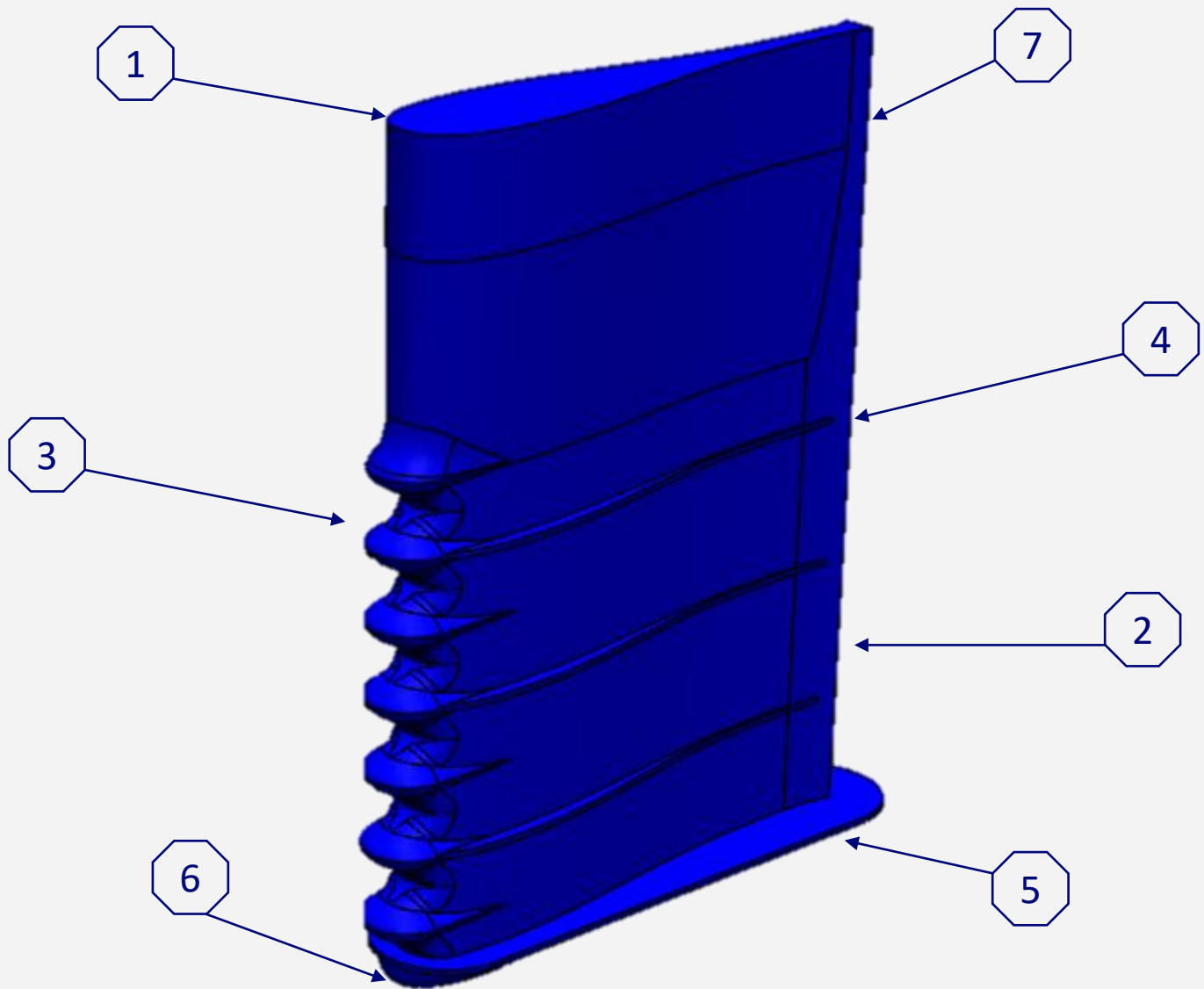


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Design

- Selection of features
- Modelling and Build





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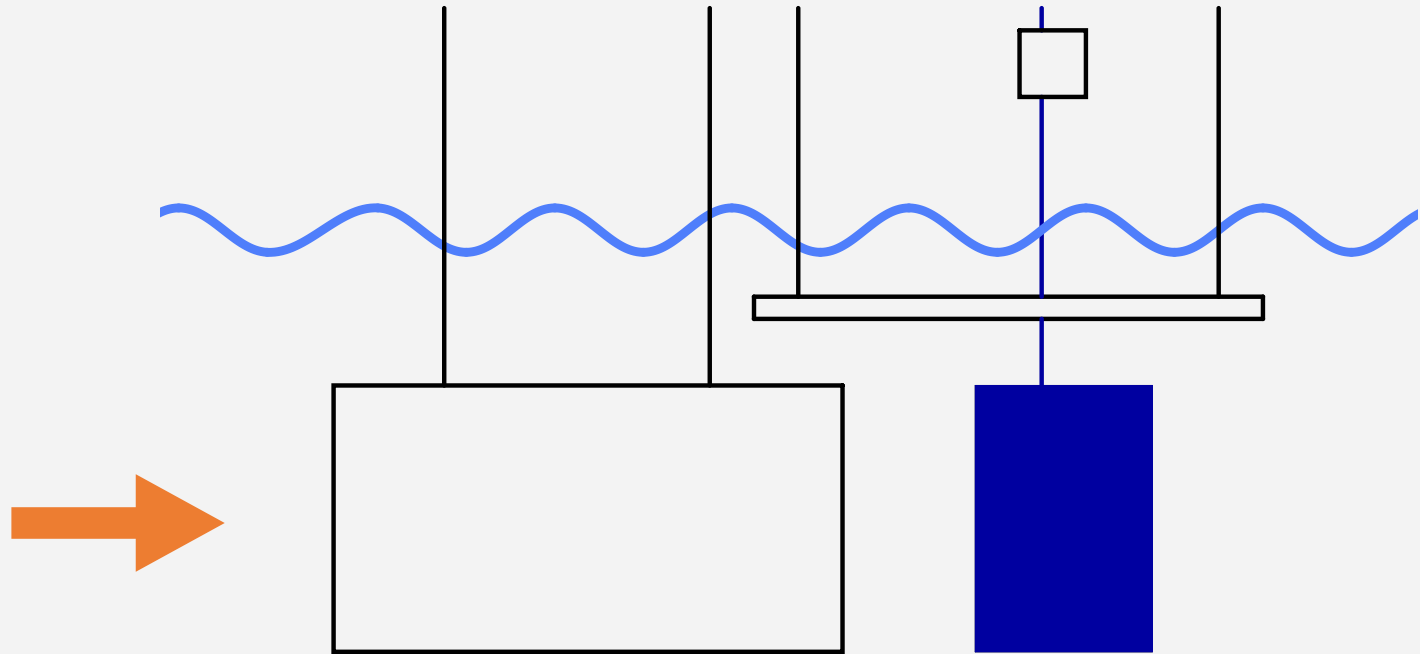


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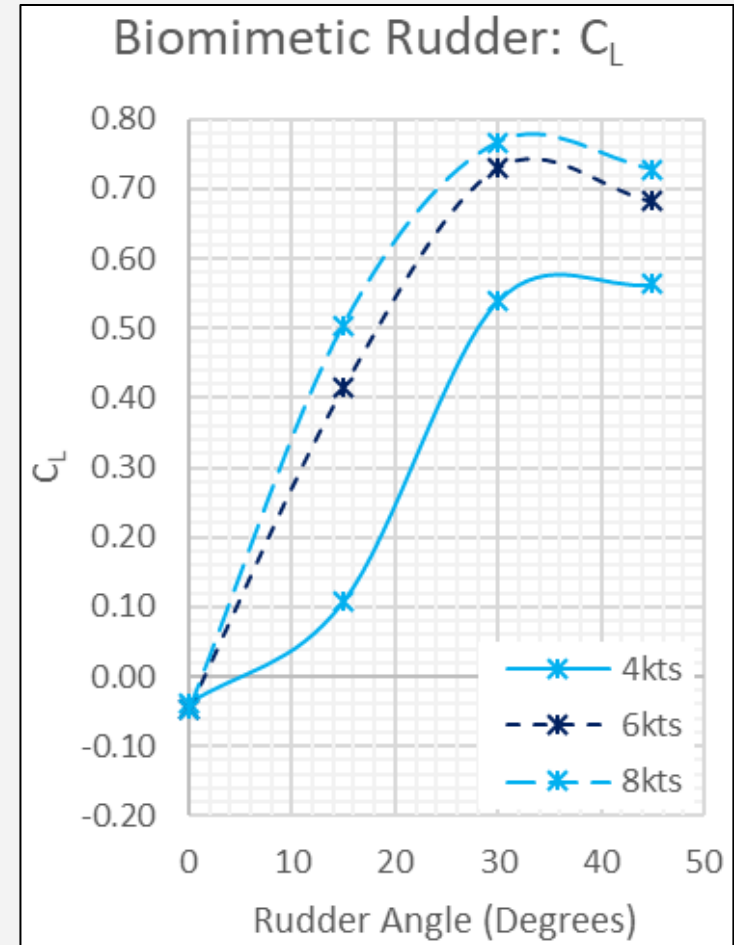
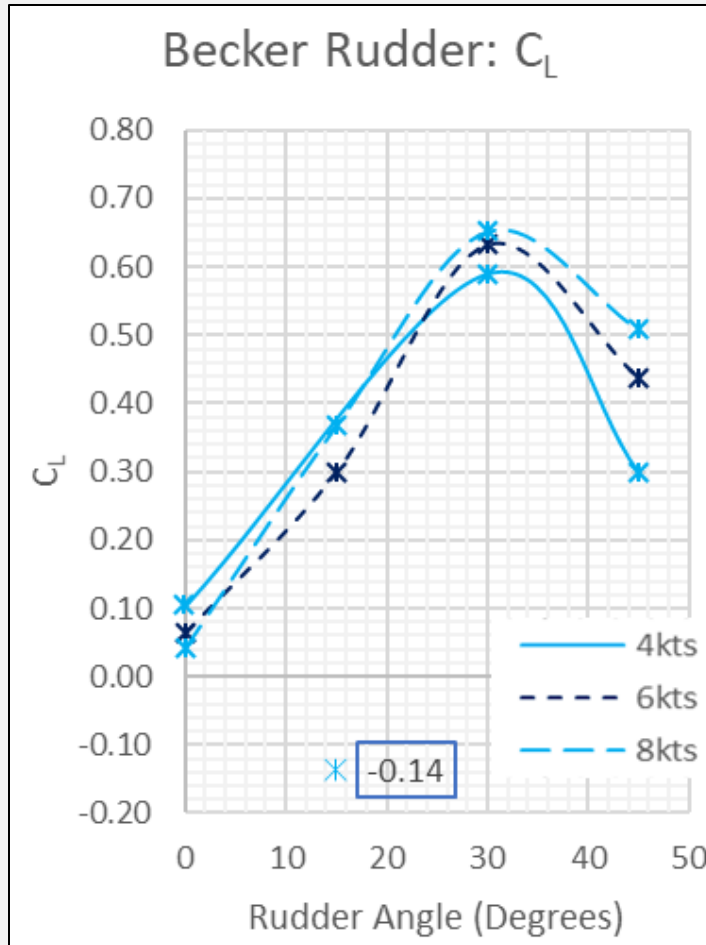
Experimental Procedure

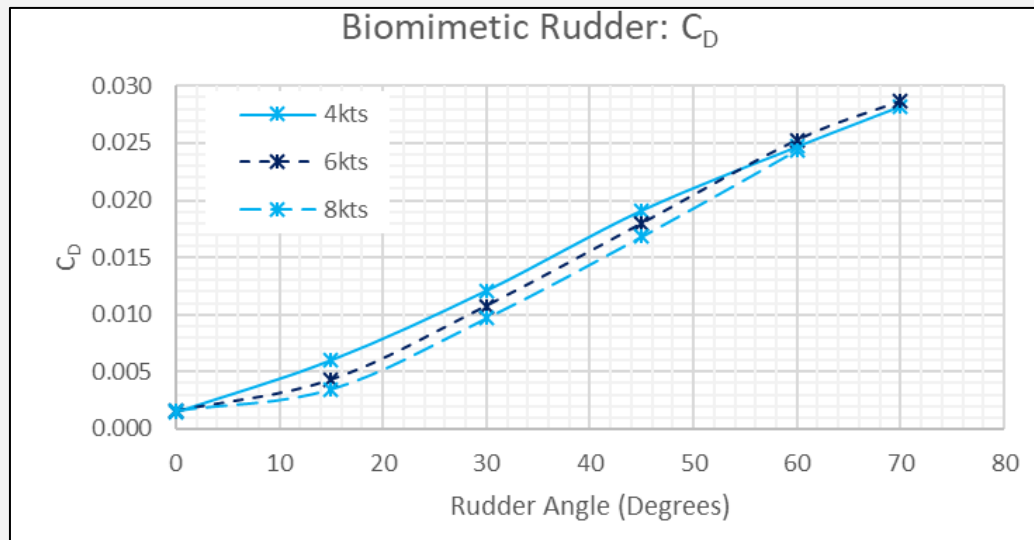
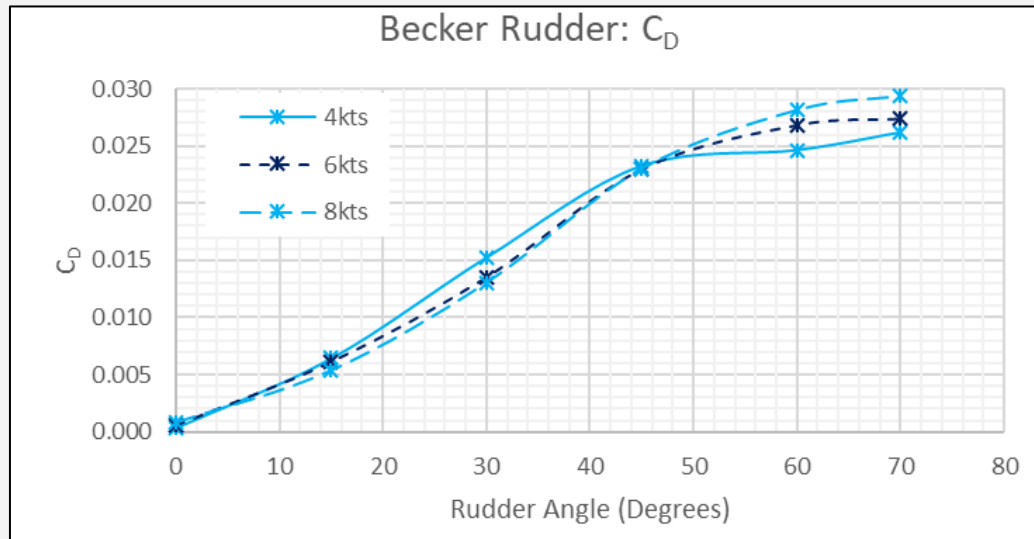


Results

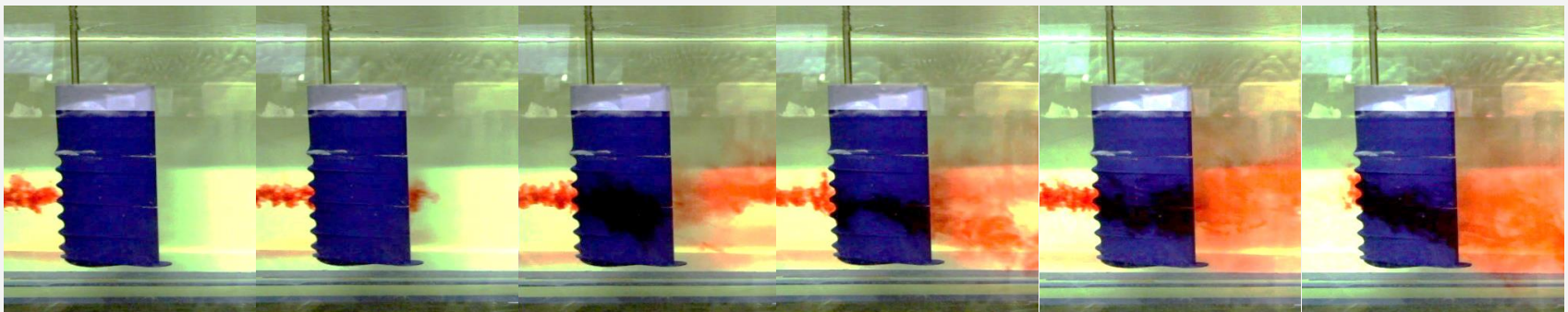
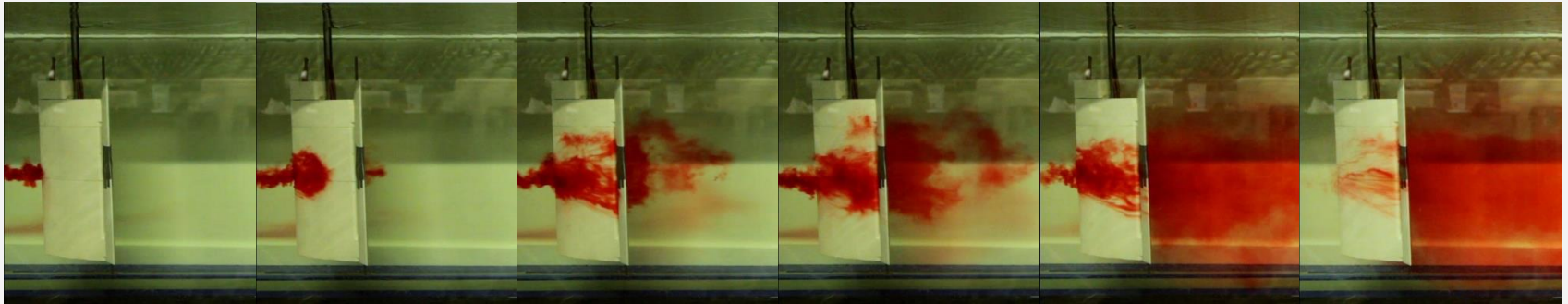
- Lift and Drag
- Vortex Control







Visual Observations



Conclusions



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Future Development



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Thank you



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