

Abstract Submitted  
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**Experiments in Methods of Vortex Induced Vibration Suppression** RICARDO GALVAO, MICHAEL TRIANTAFYLLOU, FRANZ HOVER, MIT  
— The suppression of vortex induced vibrations has many positive applications. A number of different structural modifications to a bare cylinder have been tested to determine their effect on vortex shedding and resulting vibrations. The effectiveness of these methods has been examined through imaging of the wake by means of Particle Image Velocimetry and a measurement of the drag force on the structure. A number of different configurations were considered. These include the attachment of an airfoil on opposing sides of the cylinder with and without the addition of a triangular backend. Another configuration considered involved the use of two pairs of airfoils of differing chord lengths attached at different positions relative to the cylinder. Degrees of freedom of these systems include angle of attack of the airfoils with respect to the freestream, height off of the cylinder and rotational angle of the airfoils about the circumference of the cylinder. Results show an overall improvement in reduction of the intensity of vortex induced vibrations with a drop in drag for specific combinations of airfoil position.

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