

*Abstract*

On the Role of Oscillatory Fluid Motion in Control of Turbulent Flow with Separation

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The present paper proposes an interpretation of the mechanism by which oscillatory forcing or periodic perturbation intensifies turbulent fluid motion. An experiment in a flow around a pair of square cylinders which are set in tandem in uniform flow is presented. An attempt is made to estimate instantaneous pressure field from the velocity measurement by PIV, in order to evaluate the correlation between fluctuating velocity and pressure gradient. It is likely that the generation of Reynolds stress occurs due to the velocity-pressure correlation, in addition to the conventional shear production of turbulence.