## ANALYSIS OF CONTROLLING DYNAMIC STALL WITH AN ACTIVE FLEXIBLE WALL

Niranjan L Mangla Associate Professor Department of Mechanical Engineering YMCA University of Science and Technology Faridabad-121 006, Haryana, India Ex-Graduate Student Department of Mechanical Engineering University of Mississippi, U S A Email : niranjanmangla@ymcaust.ac.in Sumon K Sinha President Sinhatech, 3607 Lyles Drive Oxford, MS 38655, U S A Ex-Associate Professor Department of Mechanical Engineering University of Mississippi, U S A Email : sumon@sinhatech.com

## Abstract

The pressure gradient near the leading edge of an airfoil changes drastically in a short region. Sub - micron vibrations introduced in the zone of zero pressure gradient at a proper time in a pitching airfoil, mounted with active flexible wall actuator, alter the boundary layers. This in turn delays the onset of dynamic stall by around 2  $\cdot$ .