

# SPECTRAL ANALYSIS OF UNSTEADY PRESSURE COEFFICIENTS NEAR THE WING TRAILING EDGE

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The flow field downstream of a stalled wing contains unsteady fluctuations which can effect the aerodynamics of the tail planes. The calculation of the wake requires temporal and spatial resolution of the large scale turbulence for instance utilising hybrid RANS/LES simulations which cause enormous computational costs. To obtain spectral information on a level of effort appropriate for parametric studies a simplified model was derived on the basis of Koopman modes. It was applied to the wake flow of a NACA 0012 airfoil in low speed stall at a Reynolds number of 6 million and delivered good agreements with CFD results.

**Key words:** unsteady measurements, CFD simulations, Koopman modes, spectral analysis.