Research Update

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Overview

• Progress Summary
• Concepts to Learn
• Plan

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Current Progress

• Literature Review:
    • Extrapolation procedure via multiwavelet basis functions and Volterra theory to extract first order and second order kernels from flight data.
    • First order = linear dynamics. Second order and higher = nonlinear dynamics.
    • Goal: to reduce test points and create procedure to extrapolate kernels during a flight test
    • Analysis: Data from the Active Aeroelastic Wing (AAW) from NASA Dryden.
Concepts to Learn

• Multi-Wavelet Basis Functions
• Volterra Theory

https://en.wikipedia.org/wiki/Wavelet
Plan

• Study “Concepts to Learn” Items.
• Research Literature For Unsteady Aerodynamics Background.