

Abstract Submitted
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Low dimensional representations of side-by-side cylinders in cross-flow subject to varying freestream turbulence ELIZABETH CAMP, RAÚL BAYOÁN CAL, Portland State University — Particle image velocity is employed to capture the near and intermediate wakes of pairs of side-by-side cylinders in cross-flow with varying levels of incoming freestream turbulence. Four sets of inflow conditions are each applied to three different transverse cylinder-to-cylinder spacing values. The center-to-center distance between the cylinders as well as the turbulence of the inflow heavily impact the mean velocity components as well as the Reynolds stresses. Proper orthogonal decomposition is used to further characterize the influence of freestream turbulence of the inflow on the wakes of each set cylinder transverse spacing.

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