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Data Fusion for Fluid Dynamic Data CHRISTOPHER RUSCHER, JOHN DANNENHOFFER, MARK GLAUSER, Syracuse University — In recent years, fluid dynamic measurement tools and computational fluid dynamics (CFD) have greatly improved, leading to vast amounts of data being collected. Extracting the useful information from large data sets can be a challenging task when investigating data from a single source. However, most experiments use data from multiple sources such as particle image velocimetry (PIV), pressure sensors, acoustic measurements, and CFD to name a few. Knowing the strengths and weaknesses of each measurement technique, one can fuse the data together to improve the understanding of the problem being studied. Using data fusion, sensor fusion, and data integration techniques in combination with fluid dynamic analysis tools, one can extract information from large multi-source fluid dynamic data sets, which is not obtainable from any single data source alone.

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