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Comparison of Stochastic Estimation Methods with Conditional Events Optimization for the Reconstruction of the Flow Around a Supercritical Airfoil in Transonic Conditions

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Highlights

- Stochastic Estimation methods are applied to estimate flow fields of an airfoil.
- Multi-Time-Delay Linear Stochastic Estimation holds the most accurate estimation.
- High frequency, short scale information is not accurately estimated.
- A sensor location optimization algorithm is proposed to choose time delays.
- Stochastic Estimation is shown to filter Gaussian noise in the flow field.

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