

Abstract Submitted  
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**Towards optimal forcing analysis of transverse jets**<sup>1</sup> SAMANTHA HAREL, KRISHNAN MAHESH, University of Minnesota — A linear input-output analysis capability is developed in an unstructured grid and parallel code with the objective of identifying the optimal location and frequency of external periodic forcing applied to a transverse jet. Past work has performed global linear stability and adjoint analyses to characterize the least stable and most sensitive perturbations for transverse jets. The time-stepper approach is used along with the Arnoldi algorithm. The lid-driven cavity and Blasius boundary problems are used as validation. Optimal and suboptimal forcing results and the respective flow responses will be discussed for multiple frequencies.

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