Transport Flux Similarity for Ensemble Vector Field Visualization

Abstract

Ensemble Vector Fields (EVF) exhibit variation between member realizations. Aspects in their variation can be derived in multiple ways, such as in Finite Time Variance Analysis (FTVA) [HOGJ13] for the entire field, or using Curve Box-plots [MWK14] for flow through a single location in the field. We present a novel approach that considers all streamlines in the EVF and their intersection with cells of the spatial domain. We consider our set of derived features for an EVF collectively as Transport Flux Similarity, and apply the method to three different data sets.

Categories and Subject Descriptors (according to ACM CCS): I.3.3 [Computer Graphics]: Picture/Image Generation—Line and curve generation

1. Introduction
2. Background
3. Method
4. Results
5. Discussion
6. Conclusion

References
