Lagrangian Coherent Structures and their application to ocean transport

THOMAS PEACOCK, MICHAEL ALLSHOUSE, MIT — The approach of Lagrangian Coherent Structures (LCSs) holds great promise for improved understanding of flow transport in the ocean, with potentially significant application to scenarios such as improved decision making strategies for pollution events. We present some improved methodology for identifying, refining and classifying LCSs in data sets and assess the utility of the approach through a number of case studies.