

1096-37-2318

Sherry E Scott* (sscott1008@gmail.com), 2973 N. 55th Street, Milwaukee, WI 53210. *A dynamical systems and harmonic analysis based method for analyzing signals and fluid flows.*

We consider an ergodic theory and harmonic analysis based method, called the ergodicity defect, in applications involving both fluid flows and signals such as segmented blood vessels taken from brain tumor MRA images. The method is used to glean insight on the behavior of the phenomena in terms of how the fluid particle trajectories or signals sample the space. In fluid flows such information can be used to better understand the transport in the flow and for brain tumor MRA images, indications about tumor therapy response can be obtained. (Received September 17, 2013)