Topological Data Analysis of High-Resolution Temporal Rainfall

Alin Andrei Carsteanu, Félix Fernández Méndez, and Raciel Vásquez Aguilar

Instituto Politécnico Nacional (IPN), Escuela Superior de Física y Matemáticas (ESFM), Ciudad de México, Mexico
(alin@esfm.ipn.mx)

This study applies topological data analysis (TDA) to the state space representations of high-resolution temporal rainfall intensity data from Iowa City (IIHR, U of Iowa). Using a sufficient embedding dimension, topological properties of the underlying manifold are depicted.