Information Neighborhoods for Visualization and Monitoring Strategies of Real Stochastic Behavior Trajectories: Computational Aspects

by CTJ Dodson

Abstract

Aspects of modern information systems challenging computational and statistical analysis are dynamic complexity, high dimensionality and inherent stochasticity. We outline the use of geometric methods to provide information neighbourhoods for data visualization and monitoring of algorithms, and dynamics of stochastic behaviour trajectories. Geometrization of models of real phenomena give valuable insights through features that are invariant under the choice of coordinate representation. Here we look at computational aspects relating to the study of real problems, avoiding mathematical details.