

Not Just Weather! Stochastic Generators to Approximate Climate Model Output

Stefano Castruccio

Stochastic Weather Generators are traditionally regarded as statistical model aimed at describing the dynamics of in-situ data for one or few sites, in order to generate synthetic 'weathers'. In this talk, I will show how the paradigm of generators can be extended beyond this notion, by allowing a statistical model to stochastically approximate a climate model in space for thousands of locations, and in time as well. The resulting statistical model will generate synthetic runs from the climate model that can be used to more efficiently assess the internal variability. As a case study, I will present an analysis of global wind data from the NCAR Large ENSEMBLE.