



Data mining techniques applied to the forecast of hurricane landfalls on North Atlantic US coasts

O. Mestre (1), S. Hallegatte (2)

(1) Ecole Nationale de la Météorologie, Météo-France, Toulouse, France, (2) Centre International de Recherche sur l'Environnement et le Développement, Nogent-sur-Marne, France

Given large scale climate indices and initial cyclone genesis point, we use statistical data mining techniques to forecast landfall occurrence on US coasts.

Several methods are compared, such as parametric and non-parametric discriminant analysis, linear and additive logistic regression, logistic regression, k nearest neighbours, trees, bagging, random forests and SVM. While linear methods perform rather well, their results may be improved by using more sophisticated techniques. Results reveal that SST and genesis point are the most relevant predictors.