

## Abstract

# NUMERICAL WEATHER PREDICTION OVER THE EASTERN CARIBBEAN

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This thesis gives a comprehensive analysis of the capabilities of numerical weather prediction models and statistical approaches to weather forecasting over the Eastern Caribbean region. The majority of this work has been centered on the Florida State University (F. S. U.) Global and Nested Regional Spectral models and it will be shown that the regional model performs better over this domain. A statistical approach using a number of weather prediction models over this region is then investigated and a sophisticated combination of their output is used to produce a superior forecast known as super-ensemble. The results from this work illustrate that the super-ensemble technique produces the best forecast.