

Speakers : Ian Scott-Fleming (Graduate Student) and Ranjini Swaminathan (Instructor)

Title : Computational models for Regional Climate Projections

Abstract: Global climate models simulate large scale atmospheric and oceanic processes that are then used for long-term climate projections under various possible scenarios. In this talk we discuss how computational models can be used to downscale these climate projections to regional and local scales, using lower-resolution output from global models as boundary conditions. We discuss the development of some of these models, as part of the work being done in the recently established regional Climate Science Center at Texas Tech University. We also describe some of the associated challenges such as big data sets, complex non-linearities and spatio-temporal relationships.