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Statistical methods for analyzing regional climate model ensembles

Stephan R. Sain *
ssain@ucar.edu

The North American Regional Climate Change Assessment Program (NARCCAP) is an ambitious multi-agency, multi-institution collaboration to produce regional projections of climate change for North America based on a multi-model ensemble of regional climate models. In this talk, I will present a statistical approach to combine the information in the ensemble based on a hierarchical Bayesian method that accounts for differences in the models as well as the spatial correlation in the model output. Specifically, this approach incorporates elements from the analysis of variances (ANOVA) to decompose and isolate sources of uncertainty.

*Institute for Mathematics Applied to Geosciences, National Center for Atmospheric Research, P.O. Box 3000, Boulder, CO 80307-3000, USA.