



**Climate Program Remote Sensing Workshop  
February 12-14, 2018**

**SPEAKER TITLES/ABSTRACTS**

**Dorit Hammerling**

NCAR

“High Performance Computing and Spatial Statistics: an overview of recent work at NCAR”

While much of the recent literature in spatial statistics has evolved around addressing the big data issue, practical implementations of these methods on high performance computing systems for truly large data are still rare. We discuss our explorations in this area at the National Center for Atmospheric Research for a range of applications, which can benefit from large scale computing infrastructure. These applications include extreme value analysis, approximate spatial methods, spatial localization methods and statistically-based data compression and are implemented in different programming languages. We will focus on timing results and practical considerations, such as speed vs. memory trade-offs, limits of scaling and ease of use.

This is joint work with Joseph Guinness, Marcin Jurek, Matthias Katzfuss, Daniel Milroy,  
Douglas

Nychka, Vinay Ramakrishnaiah, Yun Joon Soon and Brian Vanderwende