

# CSU PHYSICS COLLOQUIUM

## “Statistical modeling of complex data with applications”

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120 Engineering (Hammond Auditorium)

### **Abstract**

With the emergence of advanced technologies, massively big data and complex data objects are frequently collected in many scientific studies, as well as in commercial applications. We are facing serious challenges posed by big and complex data. For instance, a data object may contain both topological and geometric properties, and statistical analysis tools are generally underdeveloped for such non-standard data. In this talk, we will focus on two types of data from neuroscience: neuromorphology data and neuron activity data. Novel statistical methodology and fast-to-implement algorithms are presented.

### **Biography**

Haonan Wang received his Ph.D. degree in statistics from the University of North Carolina at Chapel Hill in 2003. Currently, he is a Professor of Statistics at Colorado State University. His research interests are in object-oriented data analysis, functional dynamic modeling of neuron activities, spatial and spatio-temporal modeling, and statistical learning.