

# ***2023 DONNA J. BROGAN LECTURE IN BIOSTATISTICS***



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## **Maps: A Statistical View**

Spatial statistical analysis builds upon the premise that where something happens can influence what happens, i.e., the location of observations can provide information on the observations themselves. Location can be defined on geographic maps and in geometric space, but geography often involves information beyond simple location, distance, and direction. In this presentation, we will explore how geography influences inference in spatial statistical analyses and offer geographic insights on familiar statistical constructs such as data visualization, asymptotics, classical and Bayesian inference, weighted estimation, model diagnostics, and compromises between design and modeling. We will discuss compromises between geographic and statistical precision, statistical precision and local and global probabilistic strategies for ensuring data confidentiality. Using historical and contemporary examples, we will illustrate how maps provide a critical context for data visualization and interpretation, ranging from the known (“You are here”) to the unknown (“Here be dragons”).

**Thursday, April 20 2023  
4:00 PM**

**Lawrence P. & Ann Estes Klamon Room  
Rollins School of Public Health,  
Claudia Nance Rollins Building, 8<sup>th</sup> Floor, Room 8030  
1518 Clifton Road, N.E.**

**(Reception immediately following the lecture)**

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