

Thursday, November 18th. at 6:00pm with dinner at 6:30pm

The location of the meeting is Tarasco's Mexican Restaurant
550 NW Harrison, Corvallis -- 541-757-3215.

- Participants: 35 (approx)
- Business items:
 - o Science fair
 - o By law – just chapter membership w/o ASA membership
 - o Chapter representative
 - o Winter meeting
- Presentation by Dr. Lisa Madsen, Assistant Professor

Abstract: Simulation of correlated count-valued random variables can facilitate the development of statistical methods for analyzing spatially correlated discrete processes. We compare two techniques for simulating count-valued random vector Y with specified mean and correlation structure. The first technique is a lognormal-Poisson hierarchy (L-P method). A vector of correlated normals is generated and transformed to a vector of lognormals, and Y is generated as a vector of conditionally independent Poissons with means given by the lognormals. The L-P method is simple and fast. However, the method requires each random variable to be overdispersed, and only low correlations are possible when the variables have small means. We develop a second technique to generate the elements of Y as overlapping sums of independent random variables (OS method). The OS method is shown to address some of the shortcomings of the L-P method. In particular, underdispersed random variables can be simulated, and high correlations are feasible even when the means are small. Both methods are illustrated using examples from ecological data sets.