1145-62-2264 **Jessica Rothman**, **Monica C Jackson*** (monica@american.edu), **Kimberly Sellers**, **Talithia Williams**, **Lance Waller** and **Subhash Lele**. *Correlation induced by missing spatial covariates: a connection between variance components models and kriging.*

Residual spatial correlation in linear models of environmental data is often attributed to spatial patterns in related covariates omitted from the fitted model. We connect the nonunique decom-position of error in geostatistical models into trend and covariance components to the similarly non-unique decomposition of mixed models into fixed and random effects. We specify spatial correlation induced by missing spatial covariates as a function of the strength of association and(spatial) covariation of the missing covariates. The connection with variance components models provides insight into estimation procedures. We showed how missing covariates in spatial linear models actually induces spatial autocorrelation in the covariates. This finding was confirmed through the use of simulated data and the Binary Steve dataset. (Received September 25, 2018)