1030-62-200 **Mathias Drton*** (drton@galton.uchicago.edu), University of Chicago, Department of Statistics, 5734 S. University Ave, Chicago, IL 60637. *Likelihood ratio tests and singularities.*

Statistical models are often defined in terms of polynomial constraints or polynomial parameterizations. In many of these models the behavior of statistical procedures is connected to the geometry of the semi-algebraic parameter space. This connection will be discussed and exemplified for the likelihood ratio test for which non-standard properties arise from singularities. (Received August 02, 2007)