1106-55-2273 **John D. Foley*** (foley@math.ku.dk). *Recognizing nullhomotopic maps between the classifying spaces of Kac-Moody groups.*

Among the first applications of the successful proof of the Sullivan conjecture where characterizations of nullhomotopic maps between the classifying spaces of compact Lie groups. This talk considers the problem of recognizing when maps between the classifying spaces of Kac-Moody groups—which generalize compact Lie groups—are nullhomotopic. We show that many known characterizations of nullhomotopic maps from the Lie setting extend to the Kac-Moody setting after completing at some prime p. However, assembling this p-local information with the arithmetic fiber square exposes new subtleties for our integral recognition problem. Nevertheless, we provide a solution to our problem for a set of Kac-Moody groups that includes elements of all ranks. Nullhomotopic maps between the classifying spaces of groups in this set can be detected by restricting to the maximal torus. (Received September 16, 2014)