1096-VH-697 **Pradip R Aryal*** (pradip@nmsu.edu), New Mexico State University, Department of Mathematical Science, P.O. Box 30001 Department 3MB, Las Cruces, NM 88003. *Transition density of a Brownian motion in upper-half space under Brachistochrone-type metrics.*

”I will derive some expressions for the transition density of a Brownian motion in upper-half spaces under Brachistochrone-type metrics. In one regime, 0<alpha< 2 these variable curvature metrics sit between Euclidean Brownian motion and hyperbolic Brownian motion. In this case the process has a killing time which can be expressed in terms of Bessel processes of negative dimension. In the other regime 2<alpha they behave as more extreme analogs of hyperbolic Brownian motion which never exit the domain.” (Received September 09, 2013)