Min Ranabhat* (ranabhat@ksu.edu) and Diego Maldonado. Recent updates on Poincaré and Sobolev inequalities in the Monge-Ampère quasi-metric structure.

The developments of Poincaré and Sobolev inequalities in the Monge-Ampère quasi-metric structure, at their early stages, were based on the decay rate for the distribution function of Green’s function associated to the linearized Monge-Ampère operator. In this talk, we will see a completely different approach to establish Poincaré and Sobolev inequalities as well as some improvements of these inequalities under various assumptions on the Monge-Ampère measure. (Received September 03, 2019)