1135-49-1933 **Hang Nguyen*** (`hangnguyen@wayne.edu`), **Boris S. Mordukhovich** and **Ebrahim Sarabi**.
Second-Order Variational Analysis in Second-Order Cone Programming.

This talk conducts a second-order variational analysis for an important class of nonpolyhedral conic programs generated by the so-called second-order/Lorentz/ice-cream cone $\mathcal{Q}$. We first present a precise calculation of the graphical derivative of the normal cone mapping to $\mathcal{Q}$ under the weakest metric subregularity constraint qualification and. The obtained results seem to be the first in the literature in these directions for nonpolyhedral problems without imposing any nondegeneracy assumptions. We then derive a complete characterization of isolated calmness for perturbed variational systems associated with second-order cone programs as an application of the obtained result.

The talk is based on joint work with Boris S. Mordukhovich (Wayne State University, Detroit, MI) and M. Ebrahim Sarabi (Miami University, Oxford, OH). (Received September 25, 2017)