XIA ZHOU, Memorial University of Newfoundland
On the optimal Orlicz norms and the general dual Musielak Orlicz-Minkowski problems

As one of the cornerstones of the classical Brunn-Minkowski theory for convex bodies, the Minkowski problem plays a crucial role not only in convex geometry, but also in other related fields, such as, differential geometry, PDEs and optimal transport.

In this talk, a new Minkowski-type problem will be introduced, which involves the homogeneous general dual volume. I will talk about how to derive the corresponding general dual Musielak-Orlicz curvature measures. The characterization problems to those measures, i.e., the general dual Musielak Orlicz-Minkowski problem, will be discussed and an existence and uniqueness of solutions to such Minkowski problems will be presented.