1145-31-1425 **Anders Bjorn** (anbjo@liu.se), , Sweden, **Jana Bjorn** (jabjo@liu.se), , Sweden, and **Nageswari Shanmugalingam*** (shanmun@uc.edu), Department of Mathematical Sciences, P.O. Box 210025, University of Cincinnati, Cincinnati, OH 45221-0025. *Liouville type theorems for p-harmonic functions in metric measure spaces.*

Classical Liouville theorem states that there is no bounded non-constant analytic function on the complex plane. Versions Liouville theorems were then subsequently given for harmonic functions (non-negative harmonic functions on the Euclidean space are constant, bounded harmonic functions on the Euclidean spaces are constant etc.). Given the analysis of p-harmonic functions ($1 <p< \infty$) on complete manifolds where the volume is a doubling measure supporting a p-Poincare inequality, we know the Liouville type theorem stating that "there are no non-constant positive p-harmonic functions on the manifold" holds. This theorem was extended to the setting of metric measure spaces with doubling measure supporting a p-Poincare inequality about 18 years ago. In this talk we will describe a Liouville type theorem in this general non-smooth setting for p-harmonic functions with globally finite energy. (Received September 21, 2018)