

HEAT BESOV SPACES AND BOUNDED VARIATION FUNCTIONS ON METRIC MEASURE DIRICHLET SPACES

LUKE ROGERS

Functions of bounded variation arise naturally in PDE, especially in the calculus of variations. We consider the problem of defining a notion of bounded variation functions in a metric measure space that supports a Dirichlet form, identify an associated family of Besov spaces using the heat flow, and explore some of their properties. The results are part of joint work with Alonso-Ruiz, Baudoin, Chen, Shanmugalingam and Teplyaev.