GALIA DAFNI, Concordia University, 1455 de Maisonneuve Blvd. West, Montreal, Quebec H3G 1M8
An atomic decomposition of the Hajlasz Sobolev space M^1_1 on manifolds

We compare several possible notions of Hardy–Sobolev spaces on a manifold with a doubling measure. In particular, we consider several characterizations of these spaces, in terms of maximal functions, atomic decompositions, and gradients, and apply them to the L^1 Sobolev space M^1_1, defined by Hajlasz.

Joint work with N. Badr.