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Aula Petita del CRM

**Sobolev spaces defined on a doubling metric measure space
and real interpolation**

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ABSTRACT: On a metric measure space satisfying the doubling property, we give several definitions of Sobolev spaces. If a doubling metric measure space (X, d, μ) supports a $(1, p)$ -Poincaré inequality, then we give characterizations of the real interpolation space $(L^p(X), KS^{1,p}(X))_{\alpha, q}$.