Spectral Geometry on rough spaces

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In this talk, I will discuss some issues that one faces when attempting to obtain results in spectral geometry in the presence of rough data (weight, metric, boundary, etc.). These difficulties are present both for shape optimisation and spectral asymptotics problems. I will discuss the conformal approach in the two-dimensional case, which allows one to reduce many of these problems to singular weighted problems on smooth domains. In particular, we obtain a Weyl law for the Steklov problem on domains with Lipschitz (and worse) boundary.