The projective analytic spectrum of the double of a module

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Abstract: Gaffney first introduced the double of an ideal to investigate bi-Lipschitz equisingularity of complex analytic hypersurfaces, using Lipschitz saturation of ideals and a notion of infinitesimal Lipschitz equisingularity (iL). Its genericity motivates to look for some relation with strongly bi-Lipschitz equisingularity (SL).

After we generalize the results about iL condition for modules and complex analytic varieties, and we prove that SL implies iL.

In this talk, we show some preliminary results on the study about the fibers of Projan of the Rees algebra of the double of the jacobian module associated to a complex analytic variety and how it is related to Lipschitz problems.