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Bergman projection and ramified coverings

Abstract

In this talk I will report on a work in progress with G. Dall'Ara on Bergman projections and ramified coverings of domains in \mathbb{C}^n . Thanks to a theorem of S. Bell, it is possible to lift the Bergman kernel and the problem of the L^p -boundedness of Bergman projections along a ramified covering. I will discuss and develop this idea and show how it is connected with both algebraic and analytic questions, like the structure of the deck transformation group of the covering and the membership of complex polynomials to Muckenhoupt classes.