

BERGMAN PROJECTIONS AND RAMIFIED COVERINGS

GIAN MARIA DALL'ARA

ABSTRACT. Thanks to a theorem of Bell, it is possible to lift the problem of L^p boundedness of Bergman projections along a ramified covering. This fact was recently exploited by Chen–Krantz–Yuan (JFA 2020) to prove that the Bergman projection of various singular domains is L^p bounded for p in a nontrivial range of exponents. We 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. This is joint work with A. Monguzzi.