Bergman projection induced by radial weight acting on $L^\infty(\mathbb{D})$.

José Ángel Peláez

Departamento de Análisis Matemático, Facultad de Ciencias,

Universidad de Málaga, 29071 Málaga, Spain

japelaez@uma.es

If ω is a radial weight on the unit disc, it makes sense to consider the orthogonal Bergman projection $P_\omega : L^2_\omega \to A^2_\omega$, where A^2_ω is the weighted Bergman space induced by ω. Then, the orthogonal Bergman projection P_ω is bounded from $L^\infty(\mathbb{D})$ to the classical Bloch space $\mathcal{B}$ if and only if

$$\sup_{0 \leq r < 1} \frac{\int_r^1 \omega(s)\, ds}{\int_{\frac{1+r}{2}}^1 \omega(s)\, ds} < \infty.$$

We will also present an extension of this result.

These results are part of a joint work together with Jouni Rättyä.

References

[1] J.Á. Peláez and J. Rättyä, Bergman projection induced by radial weight, Adv. Math. 391 (2021). Paper No. 107950, 70 pp.