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Aula T2 (UB).

Weighted estimates for Beltrami operators

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ABSTRACT:

While studying inhomogeneous, degenerate Beltrami equations, the following question arises in a natural way: what are the weights ω such that any Beltrami differential operator $\bar{\partial}f - \mu \partial f - \nu \bar{\partial}f$, $\|\mu\| + \|\nu\|_\infty < 1$, dominates the full differential in the $L^p(\omega)$ norm?

In the $\bar{\partial}$ setting, we know that the answer is given by the class of Muckenhoupt weights. Unfortunately, for a general Beltrami operator the situation might be different. We will give some partial answers. We will also comment on some connections with quasiconformality, and finally we will pose some open problems.