Inhomogeneous cancellation conditions in local Hardy spaces

Claudio Vasconcelos[1], Galia Dafni[2], Chun-Ho Lau[3] and Tiago Picon[4]

[1,4] Universidade de São Paulo

[2,3] Concordia University

In this work we present a new approach to atoms and molecules in local Hardy spaces $h^p(\mathbb{R}^n)$ for $0 < p \leq 1$, where the local vanishing moment condition is relaxed. As application, we provide necessary and sufficient cancellation conditions for the boundedness of Calderón–Zygmund type operators in Hardy spaces.