

Centro de Investigação em Matemática e Aplicações Departamento de Matemática

Seminário

13 de Dezembro de 2010, Segunda-feira CLAV – Anf. 1 - 14:00 horas

Singular Integrals with variable Calderón-Zygmund kernel in Morrey spaces

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Resumo

We study continuity in *Morrey spaces* of singular integral operators $\mathcal{K}f$ with variable *Calderón-Zygmund type kernel* k(x; y) and their commutators $\mathcal{C}[a; f]$ with multiplication by a *BMO*-function. The kernel satisfies the following mixed homogeneity condition with respect to y

 $k(x;r^{\alpha_{i}}y_{1},...,r^{\alpha_{i}}y_{n})=r^{-|\alpha|}k(x;y)$

for all r > 0 and any multiindex $\alpha = (\alpha_1, ..., \alpha_n)$. By expanding the kernel in Fourier series with respect to the system of *spherical harmonics* we reduce the study of these integrals to ones with nonvariable kernel.