Year: 2017 | **Vol.: 90** | **Fasc.: 1-2**

Title: Completely continuous commutator of Marcinkiewicz integral

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Let $\mathcal{M}_\Omega$ be the higher-dimensional Marcinkiewicz integral introduced by Stein. In this paper, by Fourier transform estimates, approximation and a sufficient condition for strongly pre-compact set in $L^p(L^2[1,\,2],\,l^2;\,\mathbb{R}^n)$, the authors proved that if $b \in \mathrm{CMO}(\mathbb{R}^n)$ and $\Omega \in L(\ln L)^{\frac{3}{2}}(S^{n-1})$, then for $p \in (1,\,\infty)$, the commutator generated by b and $\mathcal{M}_\Omega$ is a completely continuous operator on $L^p(\mathbb{R}^n)$.

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