



Jose EXTREMERA (jlizana@ugr.es) Department of Mathematical Analysis, University of Granada 18071 Granada, Spain. *Uniqueness of translation invariant norms in nonabelian context.*

ABSTRACT. Let G be a compact group. If the trivial representation of G is not weakly contained in the left regular representation of G on $L_0^2(G)$ and X is either $L^p(G)$ for $1 < p \leq \infty$ or $C(G)$, then we show that every complete norm $|\cdot|$ on X that makes translations from $(X, |\cdot|)$ into itself continuous is equivalent to $\|\cdot\|_p$ or $\|\cdot\|_\infty$ respectively. If $1 < p \leq \infty$ and every left invariant linear functional on $L^p(G)$ is a constant multiple of the Haar integral, then we show that every complete norm on $L^p(G)$ that makes translations from $(L^p(G), |\cdot|)$ into itself continuous and that makes the maps $t \mapsto L_t, R_t$ from G into $B(L^p(G), |\cdot|)$ bounded is equivalent to $\|\cdot\|_p$.