1113-47-125 **M. G. Cabrera-Padilla**, **J. A. Chavez-Dominguez**, **Antonio Jimenez-Vargas** and **Moises Villegas-Vallecillos*** (moises.villegas@uca.es), Facultad de Ciencias, Campus Universitario de Puerto Real, 11510 Puerto Real, Cadiz, Spain. *Lipschitz tensor product.* Preliminary report.

Inspired by ideas of Schatten in his celebrated monograph [*A theory of cross-spaces*, 1950], we introduce the notion of a Lipschitz tensor product $X \boxtimes E$ of a pointed metric space X and a Banach space E as a certain linear subspace of the algebraic dual of $\mathrm{Lip}_0(X, E^*)$, where $\mathrm{Lip}_0(X, E^*)$ denotes the space of Lipschitz functions from X to E^*.

We show that the Lipschitz injective norm ε, the Lipschitz projective norm π and the Lipschitz p-nuclear norm d_p $(1 \leq p \leq \infty)$ are uniform dualizable Lipschitz cross-norms on $X \boxtimes E$ and study their properties.

On the other hand, for a Lipschitz cross-norm α on $X \boxtimes E$, we introduce the notion of α-Lipschitz operators from X into E^* and prove that the space $\mathrm{Lip}_\alpha(X, E^*)$ of such Lipschitz operators under the α-Lipschitz norm Lip_α is isometrically isomorphic to the dual space of $X \boxtimes_\alpha E$.

In addition, if p' denotes the conjugate index of p, we show that $\mathrm{Lip}_{d_p}(X, E^*)$ is justly the space of all Lipschitz p'-summing operators from X to E^* (introduced by Farmer and Johnson) and therefore such space can be identified with $(X \boxtimes_{d_p} E)^*$. (Received August 17, 2015)