1057-46-127 **Antonio M. Peralta*** (aperalta@ugr.es), Departamento de Análisis Matemático, Facultad de Ciencias, Avda. Fuente Nueva s/n, 18071 Granada, Spain. *Right-norm and strong*-norm continuous polynomials and holomorphic mappings.*

It is well known that a linear operator, T, between two Banach spaces X and Y is weakly compact if and only if T^{**} is Y-valued. The same statement doesn't hold in the setting of multilinear operators. Concretely, there exist multilinear operators $T : X_1 \times \ldots \times X_n \to Y$ which are not weakly compact whose Aron-Berner extension is unique and Y-valued. Recent contributions by Peralta, Villanueva, Wright and Ylinen introduce the right and strong* topologies in the study of those multilinear operators T whose Aron-Berner extension is Y-valued. It was proved that, in a wide class of Banach spaces (including C*-algebras and JB*-triples), a multilinear operator admits an Y-valued Aron-Berner extension if and only if it is quasi completely continuous, that is, jointly sequentially strong*-to-norm continuous.

We shall present some new advances in the study of those linear operators between Banach spaces which are strong*-to-norm continuous obtained in collaboration with J. Diestel and D. Puglisi. We shall also survey new results establishing necessary and sufficient conditions to guarantee that a holomorphic mapping of bounded type f between two Banach spaces X and Y admits an Y-valued Aron-Berner extension. (Received January 17, 2010)