Publicacions més rellevants de la línia de recerca:
Operadors Monòtons i Convexitat

Abstract: A theorem due to Fitzpatrick provides a representation of arbitrary maximal monotone operators by convex functions. This paper explores representability of arbitrary (nonnecessarily maximal) monotone operators by convex functions. In the finite-dimensional case, we identify the class of monotone operators that admit a convex representation as the one consisting of intersections of maximal monotone operators and characterize the monotone operators that have a unique maximal monotone extension.

Abstract: It is well known that the Fitzpatrick function of a maximal monotone operator is minimal in the class of convex functions bounded below by the duality product. Our main result establishes that, in the setting of reflexive Banach spaces, the converse also holds; that is, every such minimal function is the Fitzpatrick function of some maximal monotone operator. Whether this converse also holds in a nonreflexive Banach space remains an open problem.

Abstract: We prove some generalizations of Rockafellar's surjectivity theorem and related results, which consist in replacing the duality mapping by another maximal monotone operator satisfying suitable conditions.