MAXIMAL MONOTONICITY OF BIFUNCTIONS

NICOLAS HADJISAVVAS AND H. KHATIBZADEH

For each monotone bifunction F defined on a subset C of a Banach space, an associated monotone operator A^F can be defined. The bifunction F is called maximal monotone if A^F is maximal monotone. We provide simple verifiable conditions for a bifunction to be maximal monotone and show the relation to the existence of solutions of an equilibrium problem. Also, we establish some properties of the domain of a maximal monotone bifunction. Finally, we define and study cyclically monotone bifunctions.

DEPARTMENT OF PRODUCT AND SYSTEMS DESIGN ENGINEERING, UNIVERSITY OF THE AEGEAN, 84100 HERMOUPOLIS, SYROS, GREECE
E-mail address: nhad@aegean.gr