CARPATHIAN J. MATH.
24 (2008), No. 3, 287-292

Online version available at http://carpathian.ubm.ro
Print Edition: ISSN 1584 - 2851 Online Edition: ISSN 1843 - 4401

New minimax theorems

MIRCEA BALAJ

ABSTRACT.

In this paper we establish several minimax inequalities closely related to the von Neumann-Sion minimax principle.

REFERENCES

[1] Balaj, M. and Mursan S., *Generalizations of the Fan-Browder fixed point theorem and minimax inequalities*, Arch. Math. (Brno) **41** (2005), 399–407
[2] Chang, T. H. and Yen, C. L., *KKM property and fixed point theorems* J. Math. Anal. Appl. **203** (1996), 224–235
[3] Fan, Ky, *Minimax theorems*, Proc. Nat. Acad. Sci. U. S. A. **39** (1953), 42–47
[4] Fan, Ky, *Sur un théorème minimax*, C. R. Acad. Sci. Paris **259** (1964), 3925–3928
[5] Fan, Ky, A minimax inequality and applications in *Inequalities*, III (O. Shisha, ed.), Academic Press, New York, 1972, pp. 103–113
[6] Granas, A. and Liu, F. C., *Quelques thormes de minimax sans convexit*, C. R. Acad. Sci. Paris Sr. I Math. **300** (1985), 347–350
[7] Granas, A. and Liu, F. C., *Coincidences for set-valued maps and minimax inequalities*, J. Math. Pures Appl. **65** (1986), 119–148
[8] Lin, L. J., *Applications of a fixed point theorem in G-convex space*, Nonlinear Anal. **46** (2001), 601–608
[9] Liu, F. C., *A note on the von Neumann-Sion minimax principle*, Bull. Inst. Math. Acad. Sinica **6** (1978), 517–524
[10] Park, S. *New topological versions of the Fan-Browder fixed point theorem*, Proceedings of the Third World Congress of Nonlinear Analysts, Part 1 (Catania, 2000), Nonlinear Anal. **47** (2001), 595–606
[11] Tian, G. C., *Generalizations of the FKKM theorem and the Ky Fan minimax inequality, with applications to maximal elements, price equilibrium, and complementarity*, J. Math. Anal. Appl. **170** (1992), 457–471

UNIVERSITY OF ORADEA
DEPARTMENT OF MATHEMATICS
410087 ORADEA, ROMANIA
E-mail address: mbalaj@uoradea.ro

Received: date; In revised form: date; Accepted:
2000 *Mathematics Subject Classification.* 49J53, 47H10.
Key words and phrases. *Minimax inequality, fixed point theorem, g-quasiconvex (quasiconcave) function, transfer upper (lower) semicontinuous function.*