

## ΠΑΝΕΠΙΣΤΗΜΙΟ ΙΩΑΝΝΙΝΩΝ

## ΤΜΗΜΑ ΜΑΘΗΜΑΤΙΚΩΝ



Εβδομαδιαίο Σεμινά οιο

## New Criteria for the Existence of Non-Trivial Fixed Points in Cones

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We give new criteria for the existence of nontrivial fixed points on cones assuming some monotonicity of the operator on a suitable conical shell. An interesting feature of this approach is that we do not require conditions on two boundaries, but rather on one boundary and a point with some extra information on the monotonicity of the nonlinearity on a certain set. We give an application to the existence of multiple solutions for a nonlocal boundary value problem that models the displacement of a beam subject to some feedback controllers. The talk is based on some recent works in collaboration with Alberto Cabada, Jose Angel Cid, Daniel Franco and Juan Peran.

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