Workshop at Roscoff (6-15 March 2012): Study of a general switching game

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Abstract

In this recent work, we generalize the results obtained in [3] in the case of a switching game which involves two families of non constant penalty costs: using the relationship between the value function of the switching game and an explicit system of variational inequalities with both lower and upper interconnected obstacles, we first prove existence of a continuous viscosity solution: for this, we construct two approximating schemes which converge respectively to a supersolution and a subsolution. The construction of these schemes relies on the same tools as in the case of standard switching problem (for this problem, we may cite [1], [2] or [4]).
Once a continuous viscosity solution is obtained, we are able to define both the value function of the game and an optimal (and admissible) strategy.

References

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