

1125-35-2854

**Fagner D. Araruna\*** (fagner@mat.ufpb.br), Universidade Federal da Paraiba, Departamento de Matematica, Joao Pessoa, Paraiba 58051-900, Brazil. *Stackelberg-Nash exact controllability for parabolic equations.*

We will apply the concept of Stackelberg-Nash strategies to control parabolic systems. We will assume that we can act on the equation through a hierarchy of controls. A first control (the leader) is assumed to choose the policy. Then a Nash equilibrium pair (corresponding to a noncooperative multiple-objective optimization strategy) is found; this governs the action of the other controls (the followers). We will obtain the exact controllability to a prescribed (but arbitrary) trajectory. (Received September 20, 2016)