5007-60-293 **Harold A. Moreno-Franco***, CIMAT, Guanajuato, Gto, Mexico. *Existence of the Value Function for Controlled Two-Dimensional Lévy Processes.*

The main purpose of this work is to establish the existence, and study the regularity, of a solution to a Hamilton-Jacobi-Bellman (HJB) equation arising in the minimization of an infinite horizon singular stochastic control problem, where the state process is a controlled two-dimensional Lévy process. In our model the controlled process is allowed to be a general two-dimensional Lévy process, in particular to have jumps. This makes that the HJB equation has an integral term coming from the jumps of the controlled process, and which is naturally related to the integral term of its infinitesimal generator. This is a joint with D. Hernandez and V. Rivero. (Received May 11, 2013)