1046-46-2083 Patrizia Daniele* (daniele@dmi.unict.it), Viale A. Doria, 6, 95125 Catania, Italy, and Sofia Giuffre' and Antonino Maugeri. INFINITE DIMENSIONAL DUALITY AND APPLICATIONS TO EQUILIBRIUM PROBLEMS. Preliminary report.

We present an infinite dimensional duality theory for optimization problems and evolutionary variational inequalities where the constraint sets are given by inequalities, namely $g(x) \in -C$, with C ordering cone, and also by equalities, namely $h(x) = \theta_Z$. We ensure the strong duality between such convex optimization problem and its Lagrange dual without assumptions on the interior of the ordering cone and apply our results to a wide class of dynamic equilibrium problems. (Received September 17, 2008)