The 3rd International Conference on welding, nondestructive testing and the industry of materials and alloys (ICWNDT-MI'12)

**2012**

# COMPARAISON OF HEURISTIC AND HYBRID HEURISTIC FOR THE SOLUTION OF LINEAR MODEL BASED PREDICTIVE CONTROL

**H. Merabti, D.Boucherma, K. Belarbi**

**Abstract :** In this work, we compare the application of simple meta heuristics and hybrid for the on line optimal solution of the linear MPC. For these purpose, we consider two meta heuristics: particles swarm optimization, PSO, and gravitational search algorithm, GSA and a hybrid algorithm, PSO-GSA. Two linear systems are considered, a monovariable and multivariable system.

**Keywords :** predictive control, heuristics, optimization