1016-93-49   **L. Faybusovich** (`leonid.faybusovich.1@nd.edu`), Department of Mathematics, University of Notre Dame, Notre Dame, IN 46556, **T. Mouktonglang*** (`tmoukton@nd.edu`), Department of Mathematics, University of Notre Dame, Notre Dame, IN 46556, and **T. Tsuchiya** (`tsuchiya@sun312.ism.ac.jp`), The Institute of Statistical Mathematics, 4-6-7 Minami-Azabu, Minato-Ku, Tokyo, Japan. *Implementation of Infinite Dimensional Interior Point Method for Solving Multi-criteria Linear-Quadratic Control Problem.*

We describe an implementation of an infinite-dimensional primal-dual algorithm based on the Nesterov-Todd direction. Several applications to both continuous and discrete-time multi-criteria linear-quadratic control problems and linear-quadratic control problem with quadratic constraints are described. Numerical results show a very fast convergence (typically, within 3-4 iterations) to optimal solutions. This is a join work with Faybusovich, L. and Tsuchiya, T. (Received January 20, 2006)