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**Raul Montes de Oca\*** (momr@xanum.uam.mx), Mexico City, Mexico. *Differentiable Optimal Solutions of Discounted Markov Control Processes.*

For Discounted Markov Control Processes (MCPs) on Euclidean spaces conditions which allow to establish versions of the so-called Euler Equation are presented. From the solutions of these equations it is possible to get (differentiable) optimal solutions (i.e. an optimal policy and the value function) of the MCPs considered. The examples to illustrate the theory developed are provided in the paper as well. (Received February 23, 2004)