

**Meeting:** 1006, Lubbock, Texas, SS 11A, Special Session on Future Directions in Mathematical Systems and Control Theory

1006-49-258      **Betsi J. Tirado\*** ([betsi\\_tirado@yahoo.com](mailto:betsi_tirado@yahoo.com)), Suite 280, Avenida 5 de Julio, Centro Comercial Olimpico, Local 6, 4002-1 Maracaibo, Zulia, Venezuela, and **Jesus A. Pascal** ([pascal@intercable.net.ve](mailto:pascal@intercable.net.ve)), MCO 3143, Avenida 15 Las Delicias, Centro Comercial El Pilar, Local No 8, Al lado del Edificio IPPLUZ, Maracaibo, Zulia 4002-2. *On The Hamilton Jacobi Bellman Equation for a Deterministic Optimal Control Problem.*

The dynamic programming approach produces a partial differential equation called the dynamic programming equation or the Hamilton-Jacobi-Bellman equation that the value function must satisfy in some way according to the circumstances. The issues we address in this paper are to determine the dynamic programming equation for a deterministic optimal control problem with a one-dimensional state space and to prove that the value function of the control problem is a viscosity solution of that dynamic programming equation. (Received February 15, 2005)