1124-91-108

P. Jameson Graber* (jameson_graber@baylor.edu), One Bear Place #97328, Ione Drive, Waco, TX 76798. *Linear Quadratic Mean Field Type Control and Mean Field Games with Common Noise.*

We study a general linear quadratic mean field type control problem and connect it to mean field games of a similar type. The solution is given both in terms of a forward/backward system of stochastic differential equations and by a pair of Riccati equations. In certain cases, the solution to the mean field type control is also the equilibrium strategy for a class of mean field games. We use this fact to study an economic model of production of exhaustible resources. (Received September 01, 2016)