27th IFIP TC7 Conference 2015 on System Modelling and Optimization

[Stochastic modeling, control and applications]

[**Discrete Time Linear Exponential Quadratic Gaussian Control**]

[**Bozenna Pasik-Duncan**]

[University of Kansas]

[bozenna@math.ku.edu]

Abstract:[An explicit optimal control for the discrete time linear exponential quadratic Gaussian control problem is obtained which does not use the methods of dynamic programming or stochastic maximum principle and provides some insight into the terms that occur in the Riccati difference equation that determines the optimal feedback control. The method to obtain the explicit optimal control and optimal cost is algebraic.]