

OPTIMAL CONTROL IN STOCHASTIC INVENTORY SYSTEMS

DORIVAL LEÃO

ABSTRACT. In this talk we address the problem of optimal control in stochastic inventory model with deteriorating item. The cost includes the sum of the holding cost of inventory and the production cost. The solution of the related optimal stochastic control problem will be carried out using the stochastic dynamic programming principle. Our methodology is based on the general stochastic optimal control theory developed by Leão, Ohashi and Souza ([1]). The optimal stochastic control problem is discretized in such way that a near optimal control for the discretized problem is also a near optimal control for the original problem. By applying this result, we derive near optimal controls for the stochastic inventory with deteriorating item.

REFERENCES

- [1] Leão, D. Ohashi, A. and Souza, F. (2017). STOCHASTIC NEAR-OPTIMAL CONTROLS FOR PATH-DEPENDENT SYSTEMS. arXiv:1707.04976.

ESTATCAMP CONSULTING

E-mail address: leao@estatcamp.com.br