An Important and Impactful Paper

Richard Feynman, Albert Einstein, and Leonhard Euler
The Hong Kong University of Science and Technology, Clear Water Bay, Hong Kong S.A.R., China
{feyman, einstein, euler}@ust.hk

Abstract. Stochastic control in multi-class queueing networks has been extensively studied primarily focusing on minimizing operational costs (e.g., waiting, abandonment). However, in many real-world applications, the system operator must balance the trade-off between waiting costs and maximizing immediate rewards when assigning customers to service units.

Key words: Stochastic control, Queueing network, Uncertainty, Online learning, Optimization

1. Introduction

Erlang (1948), Dantzig (1955), Dynkin (1956), Bellman (1957), Little (1961), Skorokhod (1961), McKean (1965), Iglehart (1965)

2. Model

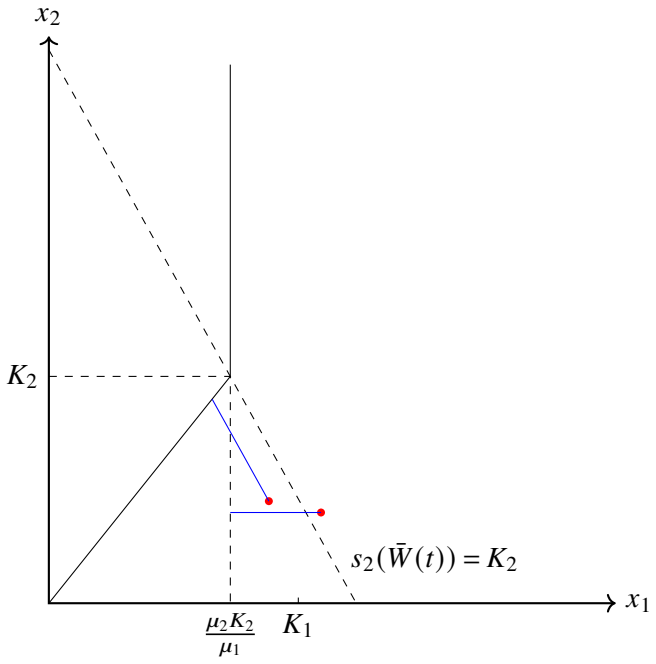

Figure 1 Sample x-y plot

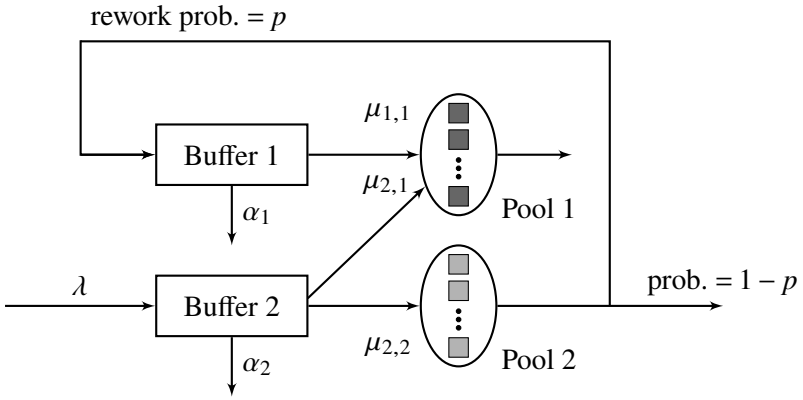

Figure 2 A schematic Model of Outsourcing with rework

3. Conclusion

References

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Proofs

EC.1. Proof of Results

EC.1.1. Proof of Lemma

LEMMA EC.1. *As long as* $t > 8\frac{d\log 9+\log(T/\alpha)}{p_*^2}$, *the following lower bound*

Proof of Lemma EC.1 □