

Optimizing Supply Chain Robustness

Nathaniel Mitrani¹, Alex Serrano², Jan Tarrats³

¹ Mathematics and Data Science and Engineering, UPC, Barcelona, Spain

² Mathematics and Data Science and Engineering, UPC, Barcelona, Spain

³ Mathematics and Computer Engineering, UPC, Barcelona, Spain

Abstract: hola

1 Introduction

hola

2 Funciones

2.1 Storage Cost Function

$$c, K_1 \in \mathbb{R}$$

$$n \equiv q_t - s_t$$

$$C(n) = \begin{cases} 0 & n \leq 0 \\ c \cdot n + K_1 & n > 0 \end{cases}.$$

2.2 Penalization Cost Function

$$d, K_2 \in \mathbb{R}$$

$$n \equiv s_t - q_t$$

$$\delta(n) = \begin{cases} 0 & n \leq 0 \\ d \cdot n + K_2 & n > 0 \end{cases}.$$

2.3 Normal Density Function

$$\sigma \in \mathbb{R}$$

$$\Phi_{\mu, \sigma^2}(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}.$$

2.4 Loss function