

# Chance constrained problems and rare events: an importance sampling approach

*Javiera BARRERA*

Facultad de Ingeniería y Ciencias, Universidad Adolfo Ibáñez.  
*Email: javiera.barrera@uai.cl*

**Abstract:** We study chance constrained problems in the presence of rare events. We discuss the relevance of considering such problems and show that the existing algorithms cannot be applied directly in this case. Using sampling methods combined with importance sampling techniques, we show how lower and upper bounds for the optimal value can be obtained and apply our methodology to a telecommunications problem.