

Solutions to Probabilistic Constrained Optimal Control Problems Using Concentration Inequalities

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Abstract : Recently, optimal control problems subject to probabilistic constraints have attracted much attention in many research field. Although probabilistic constraints are generally intractable in optimization problems, several methods haven been proposed to deal with probabilistic constraints. In most methods, probabilistic constraints are transformed to deterministic constraints that are tractable in optimization problems. This paper examines a method for transforming probabilistic constraints into deterministic constraints for a class of probabilistic constrained optimal control problems.

Keywords : optimal control, stochastic systems, discrete-time systems, probabilistic constraints

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