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Bilinear Optimal Control Problem for Stochastic Parabolic Systems

Communication Info

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- (1) Stochastic partial differential equation
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- (3) Optimal control problem.

Abstract

This work studies stochastic optimal control of parabolic bilinear systems in the case of bounded control. For a closed convex set, we prove the existence of an optimal control that minimizes the cost functional using a priori estimates. Then, using the differentiability of the cost functional with respect to the control, we establish the characterization by deriving the necessary conditions for optimal control.

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