复旦大学数学科学学院
数学综合报告会

报告题目：**Optimal Feedbacks for Stochastic Linear Quadratic Control Problems**

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报告地点：光华东主楼 1801

摘要：It is a longstanding unsolved problem to characterize the optimal feedbacks for general SLQs (i.e., stochastic linear quadratic control problems) with random coefficients, even for the case of finite dimensions. This work (jointly with my collaborators) is addressed to giving a solution to this problem. More precisely, we establish the equivalence between the existence of optimal feedback operator for infinite dimensional SLQs and the solvability of the corresponding operator-valued, backward stochastic Riccati equations. We also give a counterexample showing the nonexistence of feedback controls to a solvable stochastic linear quadratic control problem. This is a new phenomenon in the stochastic setting, significantly different from its deterministic counterpart.

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