عنوان مقاله:

.Second-order optimization control problem for McKean-Vlasov systems via L-derivatives

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خلاصه مقاله:

In this paper, we develop a second-order optimality condition for optimal regular-singular control in the integral form of McKean-Vlasov stochastic differential equations. The coefficients of the dynamic depend on the state process as well as on its probability law. The control process has two components, the first being regular and absolutely continuous and the second is an increasing process (componentwise), continuous on the left with limits on the right with bounded variation. The regular control variable is allowed to enter into both drift and diffusion coefficients. The control domain .is assumed to be convex. Our main result is proved by applying the L-derivatives with respect to probability law

کلمات کلیدی:

Second-order necessary conditions, Optimal stochastic control, L-derivatives with respect to measure, McKean-vlasov systems, Regular-singular control, Stochastic differential equation

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