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Generic Well-Posedness of Linear Optimal Control Problems without Convexity Assumptions

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Abstract: The Tonelli existence theorem in the calculus of variations and its subsequent modifications were established for integrands f which satisfy convexity and growth conditions. In our previous work a generic well-posedness result (with respect to variations of the integrand of the integral functional) without the convexity condition was established for a class of optimal control problems satisfying the Cesari growth condition. In this paper we extend this generic well-posedness result to two classes of linear optimal control problems.

Keywords: Complete metric space; generic property; integrand; linear optimal control problem.

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