

POST-PARETO ANALYSIS FOR MULTIOBJECTIVE PARABOLIC CONTROL SYSTEMS*

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Abstract

In this paper is presented the problem of optimizing a functional over a pareto control set associated with a convex multiobjective control problem in Hilbert spaces, namely parabolic system. This approach generalizes for this setting some results obtained in finite dimensions. Some examples are presented. General optimality results are obtained, and a special attention is paid to the linear-quadratic multi objective parabolic system when is possible to get explicit optimality conditions.

MSC: 90C29, 49K20, 49K27, 90K48, 93C20.

keywords: Vector Optimization, Distributed parameters systems, Parabolic systems, Optimizing over the Pareto set, Multiobjective Control problems in Hilbert spaces.

1 Introduction

Since the legendary paper of H.W. Kuhn and A.W.Tucker (1951), Multi-Objective Optimization Problems (MOP) took progressively an important

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