Optimality Conditions for Constrained Convex Parabolic Control Problems via Duality

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Abstract: The optimality system is given for a phase-constrained control problem governed by a linear parabolic equation. The control may act on the boundary and the cost function may depend on the boundary values of the final state. The optimality system follows from general results for convex state-constrained control problems by means of the theory of convex duality, using a suitable perturbation.

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