Second-order Optimality Conditions for Boundary Control Problems with Mixed Pointwise Constraints

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Abstract: In this talk, we present second-order optimality conditions for a boundary control problem which is governed by semilinear elliptic equations with mixed pointwise state-control constraints. In some cases, there is no gap between second-order necessary optimality conditions and second-order sufficient optimality conditions. In addition, we also give second-order sufficient optimality conditions for the problem where the objective function does not depend on control variables.

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