

Optimal control and regularity of boundary traces for some interactive PDE systems

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Abstract

The talk will focus on established PDE models describing acoustic-structure or fluid-structure interactions. The solvability of the associated quadratic optimal control problem will be discussed, when the system is subject to (boundary) control on the interface. This issue calls for a careful PDE analysis of a related uncontrolled system, and specifically the proof of (sharp) regularity results for the *traces* of one component of the corresponding solution.