

Control theory and nonsmooth analysis

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Abstract

One of the lessons of the last decades is that as soon as nonlinear replaces linear, it becomes highly likely that nonsmoothness will arise as an issue. This has been notably the case in partial differential equations, in optimal control, and in stabilizing feedback design. In this survey talk, which touches upon all three of these areas, we will review some of the major developments, as well as some recent progress. We shall examine in particular the role played by nonsmooth analysis.