

54. Zvi Artstein, **Rapid oscillations, chattering systems and relaxed controls.**  
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**Abstract.** Chattering systems serve as a limit model for control systems with rapidly oscillating control coefficients. This paper investigates the applicability of relaxed controls to chattering systems. In particular, the robustness of optimal relaxed controls and their ordinary approximations are examined. In the case of complete chattering, it is found that the relaxation of the optimal controls can be eliminated.

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