93. Zvi Artstein, **Relaxation in singularly perturbed control systems.** Proceedings of the 41st IEEE Conference on Decision and Control, Las Vegas, Nevada USA, pp 4330-4335.

This paper is dedicated to Jack Warga on the occasion of his 80th birthday

Abstract. When slow and fast motions are coupled in a singularly perturbed control system, the application of relaxed controls may be needed on several levels. There may be a need to relax the control affecting the slow and the fast motions and there may be a need to relax the fast flow itself, which serves as a control for the slow dynamics. The paper examines the need for the different levels of relaxation in the variational limits of the system. In particular, we show how the fast dynamics may be used in order to eliminate relaxation.

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