

25. Zvi Artstein, **Discrete and continuous bang-bang and facial spaces, or: Look for the extreme points.** SIAM Review 22 (1980), 172-185. (Reprinted in: Games and Economic Theory (Hart and Neyman, eds.), Univ. of Michigan Press, Ann Harbor, 1995, pp. 449-462.)

**Abstract.** A simple geometrical argument is used to establish seemingly different continuous and discrete bang-bang type results. Among other applications we discuss the bang-bang principle for linear continuous control systems, a generalization to discrete systems, the ranges of vector integrals, the Shapley-Folkman lemma and the Carathéodory theorem, a moment problem, and a minimum norm problem.

For a copy of this paper send a request to [zvi.artstein@weizmann.ac.il](mailto:zvi.artstein@weizmann.ac.il).