

## Sufficient conditions for evasion in a linear differential game.

### ABSTRACT

We study a linear evasion differential game in  $\mathbb{R}^2$ . Control sets of players, the pursuer and the evader, are compact subsets of  $\mathbb{R}^2$ . The terminal set of the game is the origin. The game is considered to be completed if the state of the system,  $z(t)$ , reaches the origin. If  $z(t)$  never reaches the origin, then we say that evasion is possible in the game. We obtained weaker conditions for evasion than conditions obtained by other researches. We give some illustrative examples which show the advantage of our conditions.

**Keyword:** Differential game; Control; Strategy; Evasion.