

Evasion differential game of two pursuers and one evader with coordinate-wise integral constraints

ABSTRACT

An evasion differential game of two pursuers and one evader in R^2 is studied. Unlike the traditional integral constraints, in the present work, integral constraints are imposed on each component of control functions of the players. By definition, evasion is said to be possible if the state of a pursuer does not coincide with that of the evader for all $t \times 0$. Sufficient conditions of evasion are obtained and then strategies for the evader are constructed.

Keyword: Control; Coordinate-wise integral constraint; Differential game; Evasion; Strategy