TO THE THEORY OF POSITIONAL DIFFERENTIAL GAMES
FOR NEUTRAL-TYPE SYSTEMS

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For a dynamic system whose motion is described by neutral-type differential equations in Hale's form, we consider a minimax–maximin differential game with a quality index evaluating the motion history realized up to the terminal time. The control actions of the players are subject to geometric constraints. The game is formalized in classes of pure positional strategies with a memory of the motion history. It is proved that the game has a value and a saddle point. The proof is based on the choice of an appropriate Lyapunov–Krasovskii functional in the construction of control strategies by the method of an extremal shift to accompanying points.

Keywords: neutral-type systems, control theory, differential games.

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