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VARIATION FORMULAS OF SOLUTIONS OF DIFFERENTIAL EQUATIONS WITH DEVIATING ARGUMENTS AND THEIR APPLICATION TO OPTIMAL CONTROL PROBLEMS

For various classes of differential equations with deviating arguments with a continuous and discontinuous initial conditions the variation formulas of solutions are obtained. The continuous (discontinuous) initial condition means that values of an initial function and a trajectory always coinside (generally speaking, do not coinside) at an initial moment.

For optimal problems with non-fixed initial moment and with continuous and discontinuous initial conditions the necessary conditions of optimality are proved.