Let $F_i: [0, \infty) \times \mathbb{R}^d \to \mathbb{R}^d$, $i = 1, \ldots, d$, be smooth functions $1$-periodic in each variable. Let $X_\varepsilon(t)$ be the solution of the following initial value problem:

$$\frac{dX_\varepsilon}{dt} = F \left( \frac{t}{\varepsilon}, \frac{X_\varepsilon}{\varepsilon} \right), \quad X_\varepsilon(0) = p,$$

for some given initial condition $p \in \mathbb{R}^d$.

In this paper the authors are concerned with a conjecture posed by E. De Giorgi [Set-Valued Anal. 2 (1994), no. 1-2, 175–182; MR1285828], enquiring whether from the existence of the limit $X^0(t) = \lim_{\varepsilon \to 0} X_\varepsilon(t)$, one can conclude that

$$\frac{dX^0}{dt} = \text{const.}$$


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**References**


Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.

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