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Existence and behavior of solutions of a system of quasilinear differential equations

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ABSTRACT.

This paper deals with behavior, approximation and stability of some solutions of the system of quasilinear differential equations. The behavior of solutions in the neighborhood of an arbitrary curve is considered, with extraordinary attention on some spacial cases. The obtained results contain an answer to the question on approximation as well as stability of solution whose existence is established. The errors of the approximation are defined by the function that can be sufficiently small. The theory of qualitative analysis of differential equations and topological retraction method are used.

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