
Differential equations on tori possessing a complete set of multivalued first integrals are considered. Their properties, such as the existence of an invariant measure, averaging principles, etc. are discussed. Particularities of behaviour of the systems with closed trajectories with large periods are studied. Conditions under which Kolmogorov's theorem on flows on two-dimensional tori [A. N. Kolmogorov, Doklady Akad. Nauk SSSR (N.S.) 93 (1953), 763–766; MR0062892; in Proceedings of the International Congress of Mathematicians, Amsterdam, 1954, Vol. 1, 315–333, Erven P. Noordhoff N.V., Groningen, 1957; MR0097598] can be generalized to the case of an arbitrary dimension are obtained.

References

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

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