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Nonlocal properties of analytic flows on closed orientable surfaces. (English. Russian original)

[Zbl 1087.37038](#)

Dynamical systems and related problems of geometry. Collected papers dedicated to the memory of Academician Andrei Andreevich Bolibrukh. Transl. from the Russian. Moscow: Maik Nauka/Interperiodika. Proceedings of the Steklov Institute of Mathematics 244, 2-17 (2004); translation from Tr. Mat. Inst. Steklova 244, 6-22 (2004).

Nonlocal properties of analytic flows on orientable closed hyperbolic surfaces are investigated. It is proved that the analytic vector fields are dense in the space of all C^r -vector fields endowed with the C^r -topology for any integer $r \geq 0$. Moreover, results on the points reachable by semitrajectories of analytic flows are proved. The authors also prove that the semitrajectories of an analytic flow have bounded deviation from the geodesics with the same asymptotic direction.

For the entire collection see [\[Zbl 1064.37002\]](#).

Reviewer: [Peter Raith \(Wien\)](#)

MSC:

[37E35](#) Flows on surfaces

[37D40](#) Dynamical systems of geometric origin and hyperbolicity (geodesic and horocycle flows, etc.)

[37C10](#) Dynamics induced by flows and semiflows

Cited in **1** Document

Keywords:

[analytic flow](#); [orientable surface](#); [nonlocal properties](#); [bounded deviation property](#)

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