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Arnold conjecture for surface homeomorphisms. (English) Zbl 0974.37040
[Topology Appl.](#) 104, No. 1-3, 191-214 (2000).

It is known that, in dimension two, the Arnold conjecture concerns the fixed points of area preserving diffeomorphism isotopic to the identity with vanishing mean rotation vector. It was solved by many authors using variational arguments. Since Arnold formulated the conjecture within a topological framework it would be natural to answer his conjecture on a geometrical level. This was carried out by Franks for C^1 diffeomorphisms in his celebrated paper. The main goal of this note is to remark that, with some modifications, Franks' argument is applicable even for homeomorphisms of closed and oriented surfaces.

Reviewer: [Messoud Efendiev \(Berlin\)](#)

MSC:

- [37J10](#) Symplectic mappings, fixed points (dynamical systems) (MSC2010)
- [37E30](#) Dynamical systems involving homeomorphisms and diffeomorphisms of planes and surfaces
- [37C25](#) Fixed points and periodic points of dynamical systems; fixed-point index theory, local dynamics

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Keywords:

[fixed point](#); [area-preserving map](#); [rotation vector](#); [closed and oriented surface](#)

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