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Abstracts of Short Communications and Posters

Section:

6. Topology

1991 MS Classification: 55, 57, 58
Rudyak, Yuli B., Universität–GH Siegen, Germany
Lusternik–Schnirelmann category of symplectic manifolds and the Arnold conjecture
The Arnold conjecture (see the reference) claims that, for every Hamiltonian symplectomorphism $\phi : M \to M$ of a closed symplectic manifold (M, ω), the number of fixed points of ϕ is at least the minimal number of critical points of a smooth function on M. Here we prove this conjecture for every manifold (M, ω) with $\omega|_{\pi_2(M)} = 0 = c_1|_{\pi_2(M)}$. This is the joint result with J. Oprea.
Reference: V. I. Arnold, *Mathematical Methods in Classical Mechanics.* Springer, Berlin Heidelberg New York 1989.