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Vector fields on 4-manifolds.

Definition 1 *The vector field X on smooth closed manifold M^4 belong to the class $W(T^2)$ if the set of non-wandering points of X consist of a disconnected union of embedded 2-tori with have normal hyperbolic structure.*

Theorem 2 *On M^4 exist vector field X from $W(T^2)$ with Lyapunov function f, who is T^2-Bott function such that pre-image its any regular point are union 2-torus bundles over circle,if and if M^4 is semi- graph manifold.*

The function f generates of the Kronrod-Reeb graph $\Gamma(f)$. We describe combinatorial conditions of the $\Gamma(f)$.

Using classification of Morse functions on surfaces obtained classification L - equivalent vector fields from $W(T^2)$ on semi- graph manifold M^4.

By definition two vector fields X and Y are L - equivalent if they have topological equivalent Lyapunov functions.