Towards a Poincaré-Hopf theorem
for b-tangent bundles

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A *b-symplectic manifold* is a Poisson manifold whose symplectic foliation has the maximum rank without being completely regular. The understanding of the Poisson structure of such manifolds has developed in the last years, however, the topological behavior of the foliation itself is still relatively unknown.

In this talk, a characterization of b-manifolds and their b-tangent bundles will be developed, followed by a summary of some examples and results on the topology of such bundles. Finally, a possible analogon to the Poincaré-Hopf theorem in this context will be explored together with an idea for its proof.