

INTEGRABILITY OF CONTINUOUS BUNDLES AND APPLICATION TO DYNAMICAL SYSTEMS

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In this talk, we give new sufficient conditions for the integrability and unique integrability of continuous tangent sub-bundles on manifolds of arbitrary dimension, generalizing Frobenius' classical Theorem for C^1 sub-bundles. As an application, we give a new proof of the stable manifold theorem for uniform hyperbolic systems. We also derive a condition for integrability of the center bundle that arises from partial hyperbolic systems.