

Dynamical Systems on Foliations and Existence Problem of Transverse Foliations

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§ 0. Introduction and statements of results

Let M be an n -dimensional C^∞ manifold and let $\mathcal{F}$ be a codimension one C^{r+1} foliation of M ($r \geq 1$). It is well known that there exists always a one dimensional foliation of M transverse to $\mathcal{F}$. Thus the following question on the integrability of 2-plane fields comes to the front:

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