MR926526 (89a:57034) 57R30 (58F11 58F18)

Ghys, É. (F-LILL); **Langevin, R.** (F-DJON); **Walczak, P.** (PL-LODZ)

Entropie géométrique des feuilletages. (French) [Geometric entropy of foliations]

Acta Math. **160** (1988), *no. 1-2,* 105–142.

The authors propose to generalize the notion of topological entropy of a flow to the case of a foliation $\mathcal{F}$ on a closed manifold M. To do this, a kind of parametrization is indispensable and a Riemannian metric g on M is adopted for this purpose. Thus, given $\mathcal{F}$ and g, there is defined a numerical invariant $h(\mathcal{F}, g)$ called the geometric entropy. However, its vanishing is independent of the choice of g. The authors show that $h(\mathcal{F}, g) = 0$ implies the existence of transverse invariant measures of $\mathcal{F}$. In the case of codimension-one foliations, they also show that $h(\mathcal{F}, g) = 0$ if and only if $\mathcal{F}$ does not have resilient leaves.

Reviewed by *Shigenori Matsumoto*