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Hurder, Steven (1-ILCC)
Dynamics and the Godbillon-Vey class: a history and survey. (English summary)
Foliations: *geometry and dynamics* (*Warsaw*, 2000), 29–60, *World Sci. Publishing*, *River Edge*, *NJ*, 2002.
37C85 (37A99 37D99 57R30)

This is an excellent survey on the Godbillon-Vey class, which is one of the famous invariants in the theory of codimension one foliations. Beginning with the first definition and some interpretations of the Godbillon-Vey class, the author gives the development of ideas and basic results concerning the subject. There is an interesting debate about the connection between various entropies and the Godbillon-Vey class. The list of sections, which reflects the content of the survey, is the following: 1. A simple definition. 2. Structure theory. 3. Duminy's Theorem. 4. Ergodic theory. 5. Geometric entropy. 6. Exceptional minimal sets. 7. Extensions of Godbillon-Vey. 8. Tricks and treats. 9. Open questions. The survey ends with a list of open problems.

{For the entire collection see 2002j:57001}

Reviewed by *Evgenii Zhuzhoma*