

**Ghys, Étienne**

**Riemann surface laminations. (Laminations par surfaces de Riemann.)** (French)

Zbl 1018.37028

Cerveau, Dominique et al., Dynamique et géométrie complexes. Paris: Société Mathématique de France. Panor. Synth. 8, 49-95 (1999).

This very well-written paper contains a systematic analysis of the properties of laminations by Riemann surfaces. Roughly speaking, a lamination is a generalization of a foliation to compact spaces which are not manifolds. The paper begins with a series of examples, e.g. the construction by Sullivan of a lamination associated to a  $C^r$  expanding map of the circle. Differential forms on a lamination are constructed in Section 3; then Section 4 is devoted to a Riemann-Roch formula for a lamination. Section 5 and 6 treat the problem of uniformization of a lamination. The last paragraph, Section 7, give three theorems on the existence of non-constant meromorphic functions on a lamination.

For the entire collection see [Zbl 1010.00008].

Reviewer: Viorel Vâjăitu (București)

**MSC:**

- 37F75 Dynamical aspects of holomorphic foliations and vector fields
- 30F10 Compact Riemann surfaces and uniformization
- 57R30 Foliations in differential topology; geometric theory
- 57M50 General geometric structures on low-dimensional manifolds

Cited in **4** Reviews  
Cited in **42** Documents

**Keywords:**

foliations; laminations; Riemann surfaces; holomorphic dynamical system

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