Kurke, Herbert; Osipov, Denis V.; Zheglov, Alexander B.
Formal groups arising from formal punctured ribbons. (English) Zbl 1203.14012
Int. J. Math. 21, No. 6, 755-797 (2010).

The authors continue their study of so-called ribbons initiated in [J. Reine Angew. Math. 629, 133–170 (2009; Zbl 1168.14002)].

A ribbon consists of an algebraic curve C over a ground field k, together with sheaf of k-algebras $\mathcal{A}$ endowed with a descending filtration $\mathcal{A}_i$ satisfying certain axioms. The most important examples come from curves lying as Cartier divisors on a surface X, where $\mathcal{A}_i$ is the ideal sheaf of iC viewed as a divisor on the formal completion $\hat{X}$ along the curve.

The authors study the various Picard and Brauer groups for ribbons, determine the respective tangent spaces, and prove some representability results.

Reviewer: Stefan Schröer (Düsseldorf)

MSC:

14D15 Formal methods and deformations in algebraic geometry
14D20 Algebraic moduli problems, moduli of vector bundles
37K10 Completely integrable infinite-dimensional Hamiltonian and Lagrangian systems, integration methods, integrability tests, integrable hierarchies (KdV, KP, Toda, etc.)

Keywords:

formal groups; Picard schemes; two-dimensional local fields

Full Text:

DOI arXiv

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