

**Coleman, Robert; Iovita, Adrian**

**Hidden structures on semistable curves.** (English) [Zbl 1251.11047](#)

Berger, Laurent (ed.) et al., Représentations  $p$ -adiques de groupes  $p$ -adiques III: Méthodes globales et géométriques. Paris: Société Mathématique de France (ISBN 978-2-85629-282-2/pbk). Astérisque 331, 179-254 (2010).

Summary: Let  $V$  be the ring of integers of a finite extension of  $\mathbb{Q}_p$  and let  $X$  be a proper curve over  $V$  with semistable special fiber and smooth generic fiber. In this article we explicitly describe the Frobenius and monodromy operators on the log crystalline cohomology of  $X$  with values in a regular log  $F$ -isocrystal in terms of  $p$ -adic integration. We have a version for open curves and as an application we prove that two differently defined  $\mathcal{L}$ -invariants, attached to a split multiplicative at  $p$  new elliptic eigenform, are equal.

For the entire collection see [\[Zbl 1192.11002\]](#).

**MSC:**

- [11G20](#) Curves over finite and local fields
- [11G25](#) Varieties over finite and local fields
- [11F11](#) Holomorphic modular forms of integral weight

Cited in <b>1</b> Review Cited in <b>8</b> Documents
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**Keywords:**

crystalline cohomology; log structures; de Rham cohomology; Frobenius operator; monodromy operator; modular forms;  $\mathcal{L}$ -invariants

**Full Text:** [Link](#)