

**van der Geer, Gerard**

**Exploring modular forms and the cohomology of local systems on moduli spaces by counting points.** (English) [Zbl 1446.11122](#)

Ji, Lizhen (ed.) et al., Uniformization, Riemann-Hilbert correspondence, Calabi-Yau manifolds and Picard-Fuchs equations. Based on the conference, Institute Mittag-Leffler, Stockholm, Sweden, July 13–18, 2015. Somerville, MA: International Press; Beijing: Higher Education Press. Adv. Lect. Math. (ALM) 42, 81-109 (2018).

Summary: This is a report on a joint project in experimental mathematics with Jonas Bergström and Carel Faber where we obtain information about modular forms by counting curves over finite fields.

For the entire collection see [\[Zbl 1398.14003\]](#).

**MSC:**

- 11G20** Curves over finite and local fields
- 11F03** Modular and automorphic functions
- 14Q05** Computational aspects of algebraic curves

**Keywords:**

[moduli spaces](#); [local systems](#); [cohomology](#)

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