

Deligne-Riemann-Roch isometry in the non-compact orbifold setting.

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I will report in joint work with Anna von Pippich, on a generalization of the functorial Riemann-Roch theorem of Deligne, to the case of cusp compactification of quotients of the upper half plane by fuchsian groups. This has applications to Arakelov geometry, and to analytic number theory. For instance, I will describe the analog of the analytic class number formula for the Selberg zeta function of $\mathrm{PSL}(2, \mathbb{Z})$.