Def. $\pi : E \to B$ ori. Σ_g-bdle

ξ : vertical tangent bdle of π (over E)

$e = \chi(\xi) \in H^2(E;\mathbb{Z})$ Euler class

$e_i(\pi) := \pi_!(e^{i+1}) \in H^{2i}(B;\mathbb{Z})$

i-th Miller-Morita-Mumford class

We can regard, for $g \geq 2$,

$e_i \in H^{2i}(BDiff_+\Sigma_g;\mathbb{Z}) = H^{2i}(\mathcal{M}_g;\mathbb{Z})$