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Polynomial relations among kappa classes on the moduli space of stable curves.

Abstract: We construct an infinite collection of universal, i.e. independent of (g,n) , polynomials in the kappa classes, defined first by Mumford then in the form we need by Arbarello and Cornalba, over the moduli space of genus g stable curves with n labeled points. We conjecture vanishing of these polynomials in a range depending on g and n . Recently half of these vanishing results were proven by Chidambaram, Garcia-Falde, and Giacchetto. This is joint work with Maxim Kazarian.