# Homology of big mapping class groups supported on compact subsurfaces

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**Abstract.**

If $S$ is a surface of infinite type (i.e. its fundamental group is infinitely generated), then the mapping class group $\mathrm{Mod}(S)$ is uncountable and its group homology is in many cases uncountably generated in every degree. A natural question is whether any of these homology classes are supported on compact subsurfaces of $S$. In the infinite-genus setting and with rational coefficients, for example, this equivalently asks whether the dual Miller-Morita-Mumford classes vanish on $\mathrm{Mod}(S)$.

We will discuss this question and the analogous question about support on finite-type subsurfaces, giving an almost-complete answer when $S$ has positive (for example infinite) genus and a partial answer when $S$ has genus zero, in which case it depends very subtly on the topology of $S$. This represents joint work with Xiaolei Wu.