Contribution ID: **14**   Type: **not specified**

Rational cohomology of M_{4,1}

Tuesday, 30 September 2025 10:00 (1 hour)

The moduli space M_{g,n} of non-singular curves of genus g and n marked points and its compactification, have been central objects in algebraic geometry for many years.

However, lot is still unkown about their geometry, in particular from the point of view of the rational cohomology: this is completly known only for some values of g,n. We will review what is known and focus mainly on M_{g,n}.

Most of the known cases for which the rational cohomology is completely known are due to Tommasi, via Gorinov-Vassiliev's method.

We will briefly describe such a method, used to compute the rational cohomology of M_{4,1} in a joint work with Yiu Man Wong.

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