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*Mirror curve of orbifold Hurwitz numbers*

Abstract. Edge-contraction operations form an effective tool in various graph enumeration problems, such as counting Grothendieck's dessins d'enfants and simple and double Hurwitz numbers. Edge contraction operations were also used to define axioms of Topological Quantum Field Theory and Cohomological Field Theories.

These counting problems can be solved by a mechanism known as topological recursion. We investigate recursions of orbifold Hurwitz numbers, known as Cut-and-Join equations constructed solely from combinatorial data ie edge-contraction operations. In particular we give an algebraic construction of the spectral curve of Hurwitz numbers obtained via recursion of the counting problem in genus 0 and one marked point.

This talk is based on joint work with Motohico Mulase.