Atelier : « LES ESPACES DE MODULES ET LEURS INVARIANTS EN PHYSIQUE MATHÉMATIQUE »
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***Workshop*: "MODULI SPACES AND THEIR INVARIANTS IN MATHEMATICAL PHYSICS"**
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Mirror symmetry for orbifold Hurwitz numbers

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In recent years, it has been found that many enumerative geometric problems have a common feature : they have a mirror symmetric counterpart which is governed by a universal integral recursion formula due to Eynard and Orantin. The key ingredient to the mirror theory is the existence of a spectral curve (also known as "mirror curve" in this context). Once the spectral curve mirror to a given counting problem is determined, the integral recursion uniquely calculates all generating functions of the corresponding enumerative invariants. In this talk I will show that the mirror counterparts to orbifold Hurwitz numbers satisfy the integral recursion, with spectral curve given by the "r-Lambert curve". I will also argue that orbifold Hurwitz numbers can be obtained in the "infinite framing limit" of orbifold Gromov–Witten theory of $[\mathbb{C}^3/(\mathbb{Z}/r\mathbb{Z})]$, thus shedding some light on the appearance of the recursion for orbifold Hurwitz numbers and its relation with the so-called remodeling conjecture for Gromov–Witten theory on toric orbifolds.

This is joint work with D. Hernandez Serrano, X. Liu and M. Mulase.

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