Polynomiality behaviour of Hurwitz numbers via the infinite wedge formalism

Reinier Kramer (University of Amsterdam)

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Hurwitz numbers count the number of branched coverings of the Riemann sphere with certain conditions on the ramification profiles. Equivalently, they count decompositions of the identity in centre of the symmetric group algebra. These numbers are of independent interest, but they are also related to other branches of mathematics, such as intersection theory on the moduli space of curves (via the Ekedahl-Lando-Shapiro-Vainshein formula), integrable hierarchies of Kadomtsev-Petviashvili or Toda type, or Chekhov-Eynard-Orantin topological recursion.

I will explain how to calculate certain types of Hurwitz numbers in the infinite wedge formalism, and give results on polynomiality of these Hurwitz numbers obtained in this way.