

GEOMETRY & PHYSICS SEMINAR

18 abril | 11:00 | sala 6.2.33

Quivers counting monster potentials

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Abstract:

The ODE/IM correspondence is a vast program that aims at establishing a bijection between Schrödinger operators and the Bethe roots of quantum integrable systems. One of its predictions is that the number of so-called “monster potentials” of degree N equals the number of partitions of N . This conjecture was proven by Conti and Masoero in 2009.14638 at leading order in a small parameter ε .

On the other hand, there exists a known relationship between integrable systems and quivers, motivated by supersymmetric quantum field theory. Focusing on the IM side of the ODE/IM correspondence, in this talk I will argue that the result of Conti-Masoero can be rederived using an ADHM quiver. I will show how this geometric approach provides a handle to extend the proof to arbitrarily high order in the parameter ε .

CMAFclO



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