SEMINÁRIO DE GEOMETRIA

Dia 3 de Novembro (sexta-feira), às 14h00, sala 6.2.33

Schottky Principal Bundles over Riemann surfaces

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Abstract: The Schottky uniformization theorem states that every Riemann surface X can be written as a quotient of a domain in the Riemann sphere by a Schottky group. On the other hand, the Narasimhan-Seshadri and Ramanathan well-known theorems can be viewed as uniformization results for vector and principal bundles over X.

In this presentation, motivated by a tentative Schottky uniformization for bundles, we introduce Schottky principal G-bundles over compact Riemann surfaces generalizing, to principal G-bundles, the notion of Schottky vector bundle given by Florentino, with G a connected reductive algebraic group.

We describe a correspondence between the character variety of a certain type of Schottky representations to the moduli space of flat semistable principal bundles with trivial topological type. We prove that this correspondence, under certain conditions, is locally surjective. Moreover, we show that the topological type of every Schottky principal bundle is trivial.

At the end we consider two special cases where the Schottky map is surjective.

This is joint work with A. C. Casimiro and C. Florentino.