



*Institute of Mathematical Research
Department of Mathematics*

GEOMETRY SEMINAR

Groupoid approach to Riemann-Hilbert correspondence

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Abstract

The simplest case of Riemann Hilbert correspondence states that the moduli space of flat connections on a Riemann surface X is equivalent to the representation category of the fundamental group of X . Equivalently, we may view this correspondence as the equivalence between the representation category of the tangent algebroid of X and the representation category of the fundamental groupoid of X . Generalizing this idea, we consider the tangent algebroid of X twisted by a divisor D , i.e. $TX(-D)$, whose representations are the meromorphic flat connection on (X, D) . We construct the source-simply-connected Lie groupoid integrating $TX(-D)$, and study its representations. This is work in progress with Marco Gualtieri and Brent Pym.

Date: May 3, 2013 (Friday)

Time: 3:00 – 4:00pm

Place: Room 210, Run Run Shaw Bldg., HKU

All are welcome