Mathematics, Statistics, and Computer Science   **@ UIC**

Quantum Topology / Hopf Algebra Seminar

Geometry of some unitary Riemann surface braid group representations and Laughlin-type wave functions.

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Abstract: In this talk a construction of the simplest unitary Riemann surface braid group representations is outlined via stable holomorphic vector bundles over complex tori and the prime form on Riemann surfaces. Generalised Laughlin wave functions are then introduced. The genus one case is discussed in more detail also with the help of noncommutative geometric and of Fourier-Mukai-Nahm techniques, in view of elucidating the emergence of an intriguing Riemann surface braid group duality. The talk is based on the paper 'On the geometry of some unitary Riemann surface braid group representations and Laughlin-type wave functions' J.Geom.Phys. 94 (2015),120-140.

Thursday, October 1 at 3:00 PM in SEO 612