Seminar

Prof. Thang Le

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The Habiro ring and invariants of 3-manifolds

Tuesday, February 25, 2014

at 16:00 h

ESI, Boltzmann Lecture Hall

Abstract: The Habiro ring first appeared in work of Habiro where he showed that there is a unified Witten-Reshetikhin-Turaev (WRT) sl2 invariant of integral homology 3-spheres with values in the Habiro ring. The Habiro ring has attracted attention of number theorists (Manin, Marcolli, ...) who suggest that the Habiro ring can be considered as the ring of regular functions on the elusive "field with 1 element". In the talk we will explain the Habiro ring and show that for any simple Lie algebra there is a unified quantum invariant of integral homology 3-spheres with values in the Habiro ring that reduces to the WRT invariant at roots of unity . This is joint work with Habiro.

J. Fuchs, L. Katzarkov, N. Reshetikhin, C. Schweigert

February 24, 2014