



Seminar/Talk

Bruhat-Poisson structure of the restricted Grassmannian and the KdV hierarchy

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The aim of this talk is to give an interpretation in terms of Poisson geometry of the algebro-geometric solutions of the Korteweg-de-Vries hierarchy constructed by Segal and Wilson in 1985. The central object in this theory is the restricted Grassmannian, which is an homogeneous Ka ?hler Hilbert manifold. We construct a generalized Banach Poisson-Lie group structure on the unitary restricted group, as well as on a Banach Lie group consisting of (a class of) upper triangular bounded operators. We show that the restricted Grassmannian inherits a Bruhat-Poisson structure from the unitary restricted group. Furthermore the action of the triangular Banach Lie group on it by dressing transformations generates the KdV hierarchy (as was pointed out by Segal and Wilson), and its orbits are the Schubert cells of the restricted Grassmannian.

Thursday, September 19, 2019 01:30pm - 03:30pm

Heinzel Seminar Room / Office Bldg West (I21.EG.101)



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