Integrable Systems: Geometrical and Analytical Approaches

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Type: Lecture

Classical W-algebras and generalized Drinfeld-Sokolov hierarchies

Friday, June 7, 2024 9:30 AM (50 minutes)

Classical affine W-algebras W(g,O) are algebraic structures associated to a simple Lie algebra g and a nilpotent orbit O. In this talk we want to review their definition, the construction (for all but seven nilpotent orbits for exceptional Lie algebras) of an integrable hierarchy of PDEs known as generalized Drinfeld-Sokolov hierarchy and how to derive the tau-structure of the hierarchy.

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