

Weakly integrable representations of affine Kac-Moody algebras

Prof. Souvik Pal, Christ University, Bangalore

In this talk, we shall first recall the notion of integrable modules over affine Kac-Moody algebras, after developing the necessary background. We shall then introduce the concept of weakly integrable modules (in the sense of Kac-Wakimoto) and henceforth provide a complete classification of irreducible weakly integrable modules over these Lie algebras. Finally, if time permits, we shall discuss the analogous classification result for extended affine Lie algebras of nullity 2. Our results generalize the well-known work of Chari-Pressley concerning the classification of irreducible integrable modules over affine Lie algebras.