

Title: Vibes of VOA.

Abstract: Any finite dimensional semisimple Lie algebra can be decomposed into simple ideals. Moreover, Weyl's theorem states that we can completely reduce any of its finite dimensional representations into irreducible ones. In the case of affine Lie algebras, we can say something very similar for a very special type of algebra $L_{k,0}$. In this talk, we will introduce vertex operator algebras (VOAs) and develop all the relevant machineries to discuss rationality of these VOAs.