

*Department of Mathematics,
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University of California Lie Theory Workshop

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University of Windsor

Simple highest weight modules for non-twisted affine algebras

Abstract:

Mathieu used admissible highest weight modules of finite dimensional Lie algebras to determine all torsion free modules. There is a natural analogue of admissible modules for affine Lie algebras. We use the work of Chari, Chari and Pressley and of Rao to construct all admissible modules for non-twisted affine algebras. This involves the construction of all simple highest weight modules for $A_1^{(1)}$ in \tilde{O} having finite dimensional weight spaces. We believe that this construction will actually produce all simple highest weight modules in \tilde{O} having finite dimensional weight spaces for arbitrary non-twisted affine algebras. This is joint work with Frank Lemire

Host: Efim Zelmanov

Monday, February 18, 2008

9:00 AM

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