

Meeting: 1003, Atlanta, Georgia, SS 23A, AMS Special Session on Representations of Lie Algebras, I

1003-17-131 **Meighan I. Dillon*** (mdillon@spsu.edu), Mathematics Department, Southern Polytechnic State University, 1100 S. Marietta Pkwy, Marietta, GA 30060. *Constructing Graded Lie Algebras.*

The grading determined by a long simple root of an untwisted affine or finite type Lie algebra arises from a cominuscule representation of a lower rank semisimple complex Lie algebra. Analysis of the relationship between the grading and the representation leads to a generalization of the so-called minuscule algorithm of Landsberg and Manivel as well as Kac's construction of untwisted affine Lie algebras. (Received August 10, 2004)