

1040-17-30

**Daniel K. Nakano\*** ([nakano@math.uga.edu](mailto:nakano@math.uga.edu)), Department of Mathematics, University of Georgia, Athens, GA 30602. *Lie Superalgebras: Geometry and Cohomology*.

Let  $\mathfrak{g}$  be a simple classical Lie superalgebra or a Lie superalgebra of type W. In this talk I will survey recent developments in connecting the geometry of support varieties with the combinatorial notions of defect and atypicality due to Kac-Wakimoto and Serganova. Interesting and important conjectures have been formulated in this direction. Moreover, I will present a new theorem due to Bagci, Kujawa and the speaker on realizability of support varieties for  $\mathfrak{g}$ -modules. (Received January 07, 2008)