Meeting: 1003, Atlanta, Georgia, SS 15A, AMS Special Session on Quantum Topology, I

1003-54-1155 **Nathan Geer*** (geer@math.gatech.edu), School of Mathematics, Georgia Institute of Technology, Atlanta, GA 30332-0160. *Link Invariants arising from Lie superalgebras.*

The Jones, Kauffman, and HOMFLY knot invariants are examples of invariants arising from finite dimensional representations of Lie algebras. Invariants arising from Lie algebras can be extended to Lie superalgebras. These new invariants are more powerful than invariants arising from Lie algebras. In this talk, we will discuss some new developments involving invariants arising form Lie superalgebras. For example, the Links-Gould invariant is a two variable invariant which after a variable reduction, is the Alexander-Conway polynomial. Another example of a two variable invariant arises from the Lie superalgebra D(2,1;alpha). The latter invariant is not contained in the class of invariants arising from Lie algebras. We will discuss how these invariants can be studied through the Kontsevich integral and there corresponding weight systems. (Received October 04, 2004)