
ANDREW B. ROYSTON, Texas A&M University
Magnetic Monopoles and $N=2$ super Yang-Mills

We translate recent developments in quantum Yang-Mills theory with $N = 2$ supersymmetry into statements about the kernel of certain Dirac operators, or the cohomology of certain Dolbeault operators, over monopole moduli space. This leads to a generalization of Sen's conjecture concerning the nature of the Dolbeault cohomology, and to predictions for when the Dirac operators fail to be Fredholm. This talk is based on work done in collaboration with Daniel Brennan, Greg Moore, and Dieter Van den Bleeken.