

Special Holonomy Cones, Conformal Field Theories and Confinement in Five Dimensions

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Abstract: In string/M-theory, light particles and other degrees of freedom arise at conical singularities of special holonomy spaces. After reviewing some aspects of four dimensional confining gauge theories and their relation to G2-holonomy cones we study Calabi-Yau cones of complex dimension three. In particular, using well known facts about conifolds, we show that many five dimensional (super) conformal field theories have deformations which give rise to massive, confining theories in five dimensions.