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NEW SOLUTIONS IN $D=7$ SUPERGRAVITY AND HOLOGRAPHIC CONFORMAL DEFECTS

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Abstract

In this talk we will consider minimal gauged supergravity in $D=7$ with $SU(2)$ gauge group and non-vanishing topological mass. In this framework we will present a new class of supersymmetric solutions characterized by a non-trivial profile for a dyonic 3-form gauge potential. The solutions obtained are defined by a three-dimensional Minkowski or by an AdS_3 slicing of the 7d background and, in many cases, they are asymptotically AdS_7 . For these solutions we will discuss the eleven-dimensional interpretation as effective descriptions of a particular bound state of M2 and M5 branes. Finally, between these solutions, we will consider a particular example with an AdS_3 slicing and an AdS_7 asymptotics. For this case we will construct explicitly a brane picture in massive IIA string theory defined by the bound state D2-D4-D6-NS5-D8 and we will give an holographic interpretation of the 7-dimensional solution in terms of a 2-dimensional defect SCFT inside the $(1,0)$ SCFT in $D=6$.

Date : Friday, November 17, 2017

Time: 11:00

Place: IMBM Seminar Room, Boğaziçi University South Campus