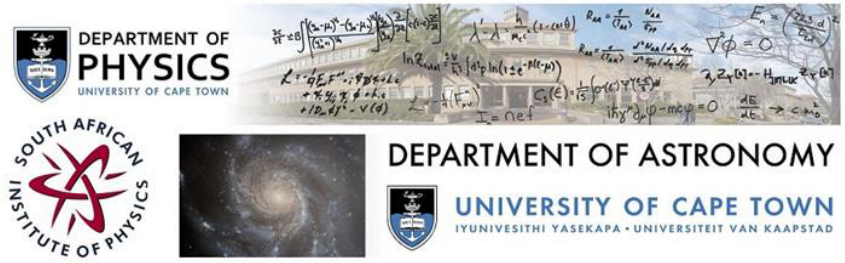

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BPS Geometries

Wednesday, 6 July 2016 11:30 (20 minutes)

Abstract content
   (Max 300 words)
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We study the example of the AdS/CFT correspondence betwee type IIB string theory on spacetimes that are asymptotically AdS₅ × S⁵ and N = 4 super Yang-Mills Theory. We consider states in the field theory dual to 1/2 and 1/4 BPS string theory backgrounds. The boundary condition for the supergravity solution is determined by a function which satisfies the Laplace equation. For regular geometries, this function must take values ±1/2 on a certain two dimensional plane. In the dual theory, this plane is identified with a phase space of Fermions by mapping the regions with ±1/2 to occupied and unoccupied states. This can be visualized as separated white and black regions. The boundary separating these two region can have any shape for 1/2 BPS geometries. For 1/4 BPS geometries, the boundary is constrained by a non-tirival differential equation.

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Main supervisor (name and email)
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