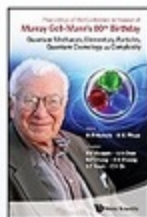


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SUPRIYA KAR, K. PRIYABRAT PANDEY, SUNITA SINGH, and ABHISHEK K. SINGH (2010) CURVED D-BRANEWORLD ACTION IN 4D AND BLACK HOLES. *Proceedings of the Conference in Honour of Murray Gell-Mann's 80th Birthday*: pp. 559-566.

*Contributed Talks: Particle Physics, Cosmology and General Relativity*

### CURVED D-BRANEWORLD ACTION IN 4D AND BLACK HOLES

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In the talk, we explore a plausible scenario for an  $AdS_5$  black hole, in an emergent gravity, underlying a two form  $U(1)$  gauge theory within the realm of type IIB superstring theory. Using  $AdS_5/CFT$  correspondence, a dual  $D_3$ -brane action governed by a nonlinear  $U(1)$  gauge field strength is proposed. The possibility of a gauge non-linearity in the open string boundary due to a torsion is discussed. Interestingly, we obtain a Reissner-Nordstrom geometry underlying "non-Riemannian" curvatures, which may alternately be viewed as a nonlinear gauge curvatures on a  $D_3$ -braneworld.