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## Supersymmetric AdS(5) solutions of massive type IIA supergravity

*Tuesday, 14 April 2015 12:20 (30 minutes)*

We discuss the classification of generic  $N = 1$  supersymmetric AdS(5)  $\times$  M solutions of massive type IIA supergravity and the discovery of new analytic ones. The necessary and sufficient conditions for supersymmetry amount to a system of differential conditions on a local identity structure on M. Known AdS(5) solutions of type IIA supergravity are reproduced by the latter. Upon making further assumptions, the system reduces to an ODE whose analytic solution yields new AdS(5) backgrounds with non-zero Romans mass; M is topologically a three-sphere fibered over a Riemann surface of negative curvature. The holographically dual 4d SCFTs conjecturally arise by compactifying 6d (1,0) SCFTs on a Riemann surface.

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