

# Codimension two solutions in five-dimensional supergravity

*Friday, August 14, 2015 10:30 AM (1 hour)*

We study a new class of supersymmetric solutions in five-dimensional supergravity representing multi-center configurations of codimension-2 branes along arbitrary curves. Codimension-2 branes are produced in generic situations out of ordinary branes of higher codimension by the supertube effect and, when they are exotic branes, spacetime generally becomes non-geometric. The solutions are characterized by a set of harmonic functions on  $\mathbb{R}^3$  with non-trivial monodromies around codimension-2 branch-point singularities. The solutions can be regarded as generalizations of the Bates-Denef/Bena-Warner multi-center solutions with codimension-3 centers to include codimension-2 ones. We present some explicit examples of solutions with codimension-2 centers, and discuss their relevance for the black microstate (non-)geometry program.  
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