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**John Huerta\*** ([huerta@math.ucr.edu](mailto:huerta@math.ucr.edu)). *Higher supergroups for string and M-theory.*

In their theory of generalized connections, Sati, Schreiber, and Stasheff propose that supergravity is governed by an L-infinity algebra extending the Poincaré algebra in 11-dimensional spacetime. I will describe how this is part of a sequence of L-infinity algebras which extend the Poincaré algebra: there are similar extensions in dimensions 4, 5, 7 and 11, where classical supersymmetric 2-branes can be defined, and in dimensions 3, 4, 6 and 10, where classical superstrings can be defined. I will show how these can all be integrated to "categorified supergroups" which extend the Poincaré supergroups in the same dimensions, suggesting that the generalized connections for these L-infinity algebras can be understood as connections on categorified bundles. (Received February 15, 2011)