1086-20-1310 John Huerta* (john.huerta@anu.edu.au). The categorified super-Poincaré group.

We discuss categorifications of certain Lie groups, replacing the Lie group with a Lie groupoid satisfying the group axioms only weakly. Specifically, in spacetimes of dimension 3, 4, 6 or 10, there are two ways to categorify the super-Poincaré group, the supersymmetric analogue of the symmetry group of Minkowski spacetime. One begins with the canonical 3-form on the orthogonal group, the other begins with a 3-form on the translation part that is closed only in these dimensions. We can also combine the two. We discuss both of these categorifications, and how they play a role in string theory. (Received September 21, 2012)