1064-17-402 **John Huerta*** (huerta@math.ucr.edu) and **John C. Baez**, Department of Mathematics, University of California, Riverside. *Division algebra technology for supersymmetric physics.*

It is well-known, thanks to the work of Dray, Manogue and others, that the vectors and spinors in spacetimes of dimension 3, 4, 6 and 10 can all be constructed in a uniform way using the normed division algebras. I will show how to extend this construction to spacetimes one dimension higher: 4, 5, 7 and 11. I will then use these constructions to give proofs of certain spinor identities, which are crucial to the existence of superstring and supermembrane theories in these dimensions. (Received September 15, 2010)