Tensor categories, algebras and superalgebras

After reviewing the basic definitions of tensor categories and the notion of semisimplification of symmetric tensor categories, it will be shown how the semisimplification of the category of representations of the cyclic group of order 3 over a field of characteristic 3 is naturally equivalent to the category of vector superspaces over this field. This allows to define a superalgebra starting with any algebra endowed with an order 3 automorphism. As a noteworthy example, the exceptional composition superalgebras will be obtained, in a systematic way, from the split octonion algebra.