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**Josh Frinak\*** (Frinakjj@uwec.edu). *Constructing the Moduli Space of 2|2-Dimensional Complex Associative Algebras.*

We study the moduli space of 2|2-dimensional complex associative algebras, in other words, the codifferentials on a 2|2-dimensional  $\mathbb{Z}_2$ -graded complex vector space. Using  $\mathbb{Z}_2$ -graded generalizations of the fundamental theorem of finite dimensional algebras and Wedderburn's Theorem classifying simple algebras over a field, we construct the moduli space by considering extensions of lower dimensional algebras. We also construct miniversal deformations of these algebras. Using information obtained by calculating cohomology classes we are able to give a complete description of how the moduli space is glued together via jump deformations. (Received September 22, 2011)