1021-18-121 **Michael Robert Penkava*** (penkavmr@uwec.edu), Department of Mathematics, University of Wisconsin-Eau Claire, 105 Garfield Avenue, Eau Claire, WI 54702-4004. *The orbifold structure of moduli spaces of algebras.*

The moduli space of Lie or associative algebras on a vector space of fixed dimension is the set of equivalence classes of algebra structures under the automorphism group of the underlying space. This space is the quotient of a variety under a group action, and thus a moduli space. In low dimensional cases, the space has been shown to have a natural stratification by orbifolds, connected by jump deformations. Thus, effectively, all the non-Hausdorff behaviour is captured in these special types of deformations. The smooth deformations give a nice stratification of the space. Moreover, the strata are projective orbifolds, hence compact. In order to realize this structure, miniversal deformations of the elements in the moduli space are used to describe smooth neighborhoods of the points, and to identify the jump deformations. (Received August 31, 2006)