1145-16-2764 **Jory L Wagner** (mathematics@uwec.edu), Hibbard Humanities Hall 508, 124 Garfield Avenue, Eau Claire, WI 54701, and **Tyler Jules Gonzales*** (mathematics@uwec.edu), Hibbard Humanities Hall 508, 124 Garfield Avenue, Eau Claire, WI 54701. *"Z2-graded Complex Associative Algebras: Background, Deformations, and Maple v.s. SageMath" presented by Tyler Gonzales and Jory Wagner.*

In this talk, we will share the research we have completed during the summer REU mathematics program. We begin by sharing some definitions, and examples, of topics we have learned relating to the field of noncommutative geometry and deformation theory. We will open this talk with a discussion on the concepts of algebras, graded vector spaces, tensor products, and the tensor algebra. We will then move into the notion of deformation theory, including an example of how to compute the bracket of what is called a versal deformation. We will conclude this talk with a comparison of Maple and SageMath, and discuss why we hope to continue the translation of the computer software from one to the next. (Received September 25, 2018)