

1154-16-2531 **Adam Wood*** (adam-wood@uiowa.edu). *Representation Theory of the Space of Holomorphic Polydifferentials.*

When a finite group G acts on a smooth projective curve over a field, one can define the space of holomorphic polydifferentials of the curve, which provides a representation of G . It is a classical problem to determine the decomposition of this representation into indecomposable subrepresentations. We survey previous work on this problem. We then use methods from algebraic geometry to describe the structure of the space of holomorphic polydifferentials when the base field has prime characteristic p and G is a group having cyclic Sylow p -subgroups. (Received September 17, 2019)