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**Carla Farsi** and **Christopher Seaton\*** ([seatonc@rhodes.edu](mailto:seatonc@rhodes.edu)), Mathematics and Computer Science Department, 2000 N. Parkway, Memphis, TN 38112. *Generalized twisted sectors and applications.*

Given an orbifold  $Q$ , the inertia orbifold is a disconnected orbifold consisting of  $Q$  itself as well as other connected components, called twisted sectors. In this talk, we discuss a generalization of this construction assigning a collection of twisted sectors to any finitely generated discrete group  $\Gamma$ ; the inertia orbifold corresponds to the case where  $\Gamma$  is the integers. We discuss the properties of these orbifolds, showing that they generalize several constructions for global quotient orbifolds. We discuss several different equivalent approaches to this construction and the corresponding applications. (Received February 20, 2009)