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Christopher W Seaton* (seatonc@rhodes.edu), Mathematics and Computer Science Department, Rhodes College, 2000 N. Parkway, Memphis, TN 38104, and **Carla Farsi** (farsi@euclid.colorado.edu), Department of Mathematics, University of Colorado at Boulder, Campus Box 395, Boulder, CO 80309-0395. *Generalized orbifold Euler characteristics and cohomology.*

Tamanoi introduced a collection of generalized orbifold Euler characteristics for orbifolds of the form M/G where M is a manifold and G a finite group. These generalized orbifold Euler characteristics contain the stringy orbifold Euler characteristic as a specific example. In this talk, we introduce a method for generalizing this definition to orbifolds that are not necessarily global quotients. We also introduce the related generalized Euler-Satake characteristic and related Euler classes in the framework of general orbifolds and discuss relationships with Chen-Ruan cohomology and obstructions to nonvanishing vector fields on orbifolds. (Received August 08, 2008)