

1049-57-67

Joseph E Borzellino and **Victor W Brunsden*** (vwb2@psu.edu), Penn State Altoona, 3000
Ivyside Drive, Altoona, PA 16601. *The Stratified Structure of Spaces of Smooth Orbifold
Mappings.*

4 different notions of orbifold map are presented for maps between smooth, closed orbifolds \mathcal{O}_1 and \mathcal{O}_2 . The spaces of orbifold mappings corresponding to each of these are either a) a manifold, b) a stratified space, c) an orbifold or d) a space stratified with orbifold strata for each of these distinct notions. The model spaces are Banach spaces for C^r maps where r is finite and Fréchet spaces for C^∞ maps in all cases. Corresponding to each possible notion of orbifold map is a category of orbifolds. (Received February 18, 2009)